ENVIRONMENTAL IMPACT ASSESSMENT

SOCIO-ECONOMIC COMPONENT

ROSS BAY JUNCTION - CHURCHILL FALLS TOTE ROAD

TRANSPORTATION

GOVERNMENT OF NEWFOUNDLAND & LABRADOR

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
DEPARTMENT OF TRANSPORTATION

Office of the Minister
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ST. JOHN'S

File No. PR/71

MAR 1 1 1986

Honourable John Butt, M.H.A.
Minister,
Department of Environment
Elizabeth Towers
100 Elizabeth Avenue
St. John's, NF
A1C 5T7

Dear Colleague:

RE: Socio-Economic Component Report - Ross Bay Junction to Churchill Falls Tote Road Environmental Assessment

In accordance with Section 9 (10) of the Environmental Assessment Regulations, 1984, I am enclosing twenty-five (25) copies of the Socio-Economic Component Report for the Ross Bay Junction to Churchill Falls Tote Road Environmental Assessment. This report was prepared by Labrador Environmental Services Limited.

The views and recommendations presented herein are those of the consultant and do not necessarily reflect the policies and procedures of the Department of Transportation.

The information contained in this report relates specifically to the Socio-Economic Component. There are six (6) additional component studies as well as an Environmental Impact Statement. Any views or comments which are expressed about this report should consider the other component studies and moreover, the Environmental Impact Statement which, in addressing the overall environmental impacts of the proposed project as documented in the component studies, will provide the clear statement of the policies and procedures of the Department of Transportation with respect to this project.

(...../2)

My department looks forward to your review and examination of this report.

If you have any questions, please do not hesitate to contact me or my staff.

Sincerely,

RON DAWE
MINISTER OF TRANSPORTATION

/dm
Enclosures

ROSS BAY JUNCTION TO CHURCHILL FALLS TOTE ROAD ENVIRONMENTAL IMPACT STATEMENT

Socio-Economic Study

prepared by

D.W. KNIGHT ASSOCIATES LTD.

under contract to

LABRADOR ENVIRONMENTAL SERVICES LTD.

for

NEWFOUNDLAND DEPARTMENT OF TRANSPORTATION

March 21, 1986

Acknowledgements

This report would not have been possible without the assistance of many people who have given so willingly of their time to provide information necessary for its compilation. In particular we should like to thank those Labradorians who answered questionnaires for us and to the residents of Sheshashui for providing us with insight into their concerns and way of life.

Our thanks also go to many other people in Labrador and throughout the Province in various government departments, agencies and private business who have also supplied us with much additional information.

Preface

The proposed Labrador tote road will link the communities of Labrador City, Wabush and Churchill Falls with a seasonal gravel road, open in the summer months only. This link would be a step in the development of a Trans-Labrador Highway.

Construction of this road has already begun and a gravel road now leads east from Labrador City to just east of Ross Bay Junction, a distance of approximately sixty eight kilometres. There are two possible route alternatives which the tote road may follow. (See Figure 1)

The first and more direct of these is the 'proposed' or more southern route which would link Ross Bay Junction with the Esker Road near Twin Falls, a distance of 130 kilometres. It is expected that construction of this route would take 7 years to complete. The second and more northern route would parallel the railway line from Ross Bay Junction to a point east of Esker and then follow the existing road from there to Churchill Falls. This route is considerably longer than the proposed route, although the portion requiring new construction is shorter - 90 kilometres. The existing Esker Road would require upgrading to meet Department of Transportation standards, including some realignment.

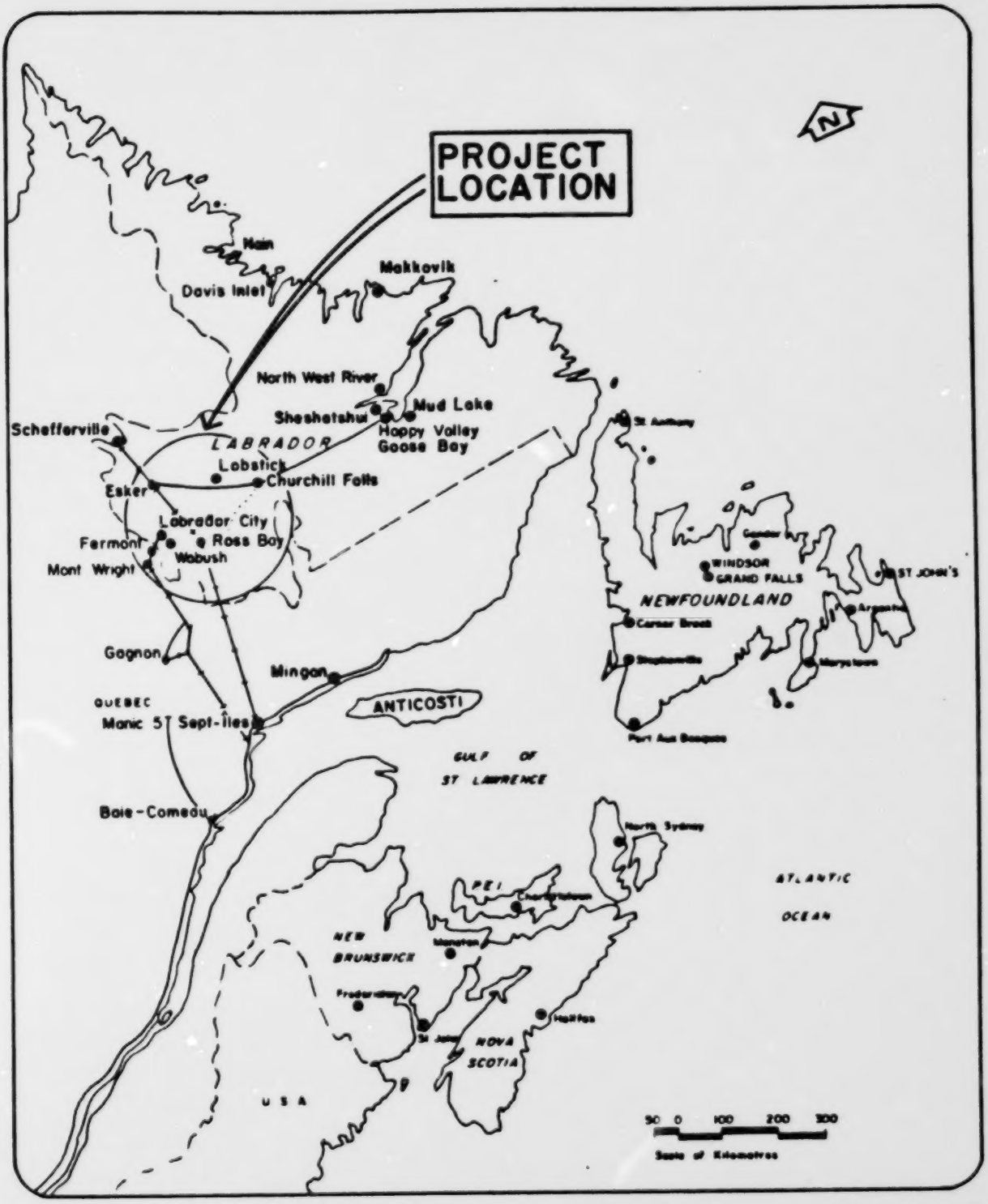
Regardless of which route is chosen, the communities of Labrador West and Churchill Falls will have a direct road link for the first time in their history and it will be possible to drive from Labrador City to Happy Valley/ Goose Bay, as the Tote Road would link up with the Churchill River Road. However, the latter is in poor condition, is also not maintained in winter, and would require considerable upgrading to permit any volume of traffic to use it.

Labradorians attach great weight to the potential significance of a completed Trans-Labrador Highway. It is perceived to be the answer to Labrador's economic problems, an end to the area's isolation and the key to the develop-

ment of natural resources.

What the real impact of the road will be will not be known for many more years. However even at this stage in the planning process it is becoming apparent that the 'real' impact on Labrador will come with the completion of the Quebec Highway link from Baie Comeau to Labrador City, and to a lesser extent the upgrading of the link between Churchill Falls and Happy Valley/ Goose Bay. The impacts of the Labrador tote road from Labrador City to Churchill Falls will fade into insignificance in comparison to the completion of a Trans-Labrador Highway or the link to Baie Comeau. In short, the whole will be more than the sum of the parts.

As stated in Noah (1974) "Although the proposed highway will bring about significant benefits as each section is completed, the major impact will be felt after linking at both ends to the existing national highway network in the Province of Quebec, and in the Island portion of Newfoundland."



ROSS BAY JUNCTION – CHURCHILL FALLS TOTE ROAD

TRANSPORTATION

FIGURE 1: Project Location

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CHAPTER 1: INTRODUCTION

It is a well established fact throughout both the developed and underdeveloped areas of the world that an efficient transportation system underlies both the social and economic development of a region. Labrador is no exception. From the time of the early white settlers, to the recent growth of resource based industries a common plea of all has been the need for improved access to the area either by sea or land. Even more recently, the major air carriers operating in the province have come under heavy criticism for their failure to provide a regular and reliable service between the communities in Labrador and from there to other parts of Canada.

The perceived importance of a well developed transportation system to the growth of the Labrador economy was documented in 1984 by a Rural Development Specialist with the Department of Rural, Agricultural and Northern Development in an overview of submissions by the four Regional Development Associations in coastal Labrador, an excerpt of which follows:-

"Transportation has to be the most important concern as we proceed to document proposals for any future agreements for Labrador. With the continuing threat of a declining fishery we must find an alternative industry or industries if coastal Labrador is to continue its existence. That alternative, will only be realized if we can convince governments that improvement in our transportation system is an essential element to social and economic growth in Labrador."

The Labrador Development Survey carried out by the Department of Rural, Agricultural and Northern Development in March 1985, questioned respondents to determine their perceptions of the particular development constraints which face Labrador. Transportation was most often quoted as the greatest constraint to development.

The conclusions reached in the Quebec Trans-Labrador Highway Report (Noah, 1974) attached immense importance to the role of the completed highway in the development of Labrador. This study was aimed at a year round, high quality

highway extending from the Quebec North Shore, across Labrador to Lake Melville and south to the Labrador Straits.

In short, both governments and residents alike attach heavy weight to the role an improved transportation system could have in stimulating economic development in the region. However, this "vision" of reality may well prove to be totally erroneous. It is quite unlikely that the provision of a road link of and by itself will do anything to promote large scale economic growth in Labrador.[1]

1.1 Objectives

The primary objective of this study was to assess the potential impacts of the Labrador tote road on social and economic aspects of life in Labrador.

The approach adopted in undertaking this impact assessment involved:

i) a combination of experiences elsewhere and

ii) perceptions of local residents.

No one approach could be used in isolation as erroneous conclusions may have resulted.

In order to focus in on the key impact areas early in the study a literature review and scoping study were undertaken. The literature review enabled the study team to list potential impact areas while the scoping study allowed the identification of locally relevant key impacts. This approach is discussed in detail in Chapter 2.

In any impact study it is necessary to establish/describe a base against which future impacts can be measured. Focussing in on the key impact areas but not solely confined to them, current information on various aspects of the Study Area communities has been provided. This forms the baseline against which future impacts can be measured. In many cases this baseline or profile

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[1] See Section 4.2.2 (vi), Resource Development Opportunities

information is quantitative; in others qualitative. Both types of information however, provide suitable/reliable "measures" of the existing conditions in the Study Area communities.

The assessment of impacts has been carried out through extensive consultation and interviewing throughout the Study Area and with many other key personnel both in Labrador and St. John's.

1.2 Key Indicators

Considerable criticism has been levelled against much previous socio-economic impact analysis for its failure to choose appropriate social and economic indicators as a baseline against which impacts of a project can be measured.

Indicators have been deemed inadequate for a variety of reasons including:-

i) For impact assessments in northern areas, indicators have been seen as more relevant to southern urban environments rather than more isolated northern ones,

ii) They have been confined solely to objective economic and social measures.

iii) Direct relationships have been assumed between key indicators. As Blishen et al (1979) state: "...If incomes rise because of industrial development, it does not necessarily follow that people's satisfaction with their financial position or the quality of their lives would rise also..."

iv) Key indicators in many cases do not reflect key issues and there is a tendency to collect available rather than relevant information.

In arriving at a list of key indicators to be used in this study, we have tried to be aware of the criticisms outlined above. However, several constraints influenced the final choice of key indicators to be used. These

were:-

i) The requirement to respond directly to the Terms of Reference for this study and subsequently data requirements as outlined under the Environmental Assessment Act.

ii) The unavailability of much objective data at the individual community level or even for Labrador. Such was the case, for example, in trying to assess the number of vehicles, and the amount of fuel consumed in the area.

The final list includes both objective and subjective indicators and both quantitative and qualitative ones.

The magnitude of impacts resulting from construction of the Tote Road is based on the comparison of values of the different indicators before and after development. Olsen and Merwin (1977) provide a formula which is constructed as follow:

Impact = Indicators at time 2 with innovation - Indicators at time 2 without innovation.

It is important to note that the impact is not a change in the existing condition of that indicator but a change in what the future condition would be without the innovation, i.e. the Tote Road.

The key indicators used in the Socio-economic Study are as follows:-

Economic

Structure of community economic activities

- current economic activity.

- occupational structure.
- employment/unemployment.
- ratio of male/female employment.
- location of markets.
- sources of materials.
- income levels.

Social

Population characteristics

- age.
- sex.
- growth characteristics.

Education

- number of schools.
- levels of education.
- number of teachers.
- adult education programs.
- administrative structure.
- teacher workshops.

Housing

- type and condition.
- period of construction.
- prices.
- vacancy rates.

Social Services and related features

- facilities and services.
- alcoholism.

- crime.

Community organizations

- types of organizations.
- membership.
- objectives.

Subjective indicators

Degree of isolation experienced

Transportation network

- types of transportation
- volumes of passengers.
- rates for freight movement.
- fares for passengers/vehicle movement.
- time involved.
- problems currently experienced.
- current travel patterns.

CHAPTER 2: STUDY APPROACH AND DESIGN

2.1 Approach

Determination of Key Impact Issues

The determination of key impact issues in the socio-economic study was achieved through three separate but inter-related methods. These were:

1) The Scoping Study

2) A literature review, and

3) The relevance tree procedure

In arriving at a list of impact issues, the Study Team tried to be as comprehensive as possible and to avoid the inadequacies of other socio-economic impact assessment work. The requirement for socio-economic impact assessment is of relatively recent origin and as such there is little relevant data on impact identification and measurement that is directly comparable with the Labrador tote road situation. Socio-economic impact assessment of highway projects has generally been relegated to second place in previous EIS's, the primary concern of such work being impacts on the physical or biological environment. For example, in the background report for the Impact Assessment on the Dempster Highway, only a few pages are found dealing with socio-economic concerns. The main body of the report deals with impacts on the caribou herd. It was not until the Berger inquiry into the MacKenzie Valley Pipeline was underway that a wealth of social concerns were raised.

Other studies have been criticized for their failure to include the affected public in the impact identification process and for failure to deal with impacts upon the way of life of people living in the area.

The use of the three procedures identified above ensured:

1) The early involvement of the public in the impact assessment process;

2) The identification of impacts relevant to the study area and to the inhabitants living there, and

3) The reduction of bias in the selection of relevant impacts through the combination of input from the consultant study team, the general public, the literature and the proponent.

Blishen B.R. et al (1979) have criticized much northern impact work for its tendency to use indicators of change that are more relevant to the urbanized south than the emerging Canadian north, and have therefore stressed the need to isolate locally relevant socio-economic indicators. The emphasis of this study in choosing indicators to reflect changes in the "way of life", whether native or non-native, is one attempt to avoid this southern or urban bias. "Way of life" is very broadly defined to include employment patterns, travel patterns, social and community activities and business and other activity in the study area.

This "way of life" framework is of necessity broadly defined. Our survey of the literature has shown that there is no "best method" in the identification of relevant variables and indeed in most studies we have reviewed there has been no explicit conceptual framework used in the identification of key indicators and/or variables used to measure impacts of a project. The report on the Shakwak Highway Project (1978) was criticized by the panel for its failure to undertake any in-depth assessment of socio-economic impacts. As a result, specific guidelines were established for the ongoing development of social impact reports and a checklist of impacts to be considered was drawn up. There are other such check-lists scattered throughout the literature which in total provide an exhaustive summary of possible socio-economic impacts arising from such a project. We have reviewed these lists for their relevance to the Labrador tote road and together with the scoping study and professional input have arrived at a set of relevant factors.

Each of the relevant factors or impact areas is outlined in Appendix B[2] in terms of the unit of measurement to be used in assessing potential impacts, the instrument or method used to collect the necessary data, and the levels of significance to be attached to the impacts.

Significant Impacts: An Operational Definition

The question of whether or not the outcomes of a particular project or event will have "significant" impacts on the physical and human environments clearly constitutes the very essence of impact assessment. As Beanlands and Duinker (1983, 43) so clearly point out, "From any perspective - technical, conceptual or philosophical - the focus of impact assessment at some point narrows down to a judgment whether the predicted impacts are significant."

The problem that arises is that there are no universal yardsticks against which the judgment of significance/insignificance can be made. Ultimately all such judgments are measured against some yardstick that reflects human, social and economic values. These values vary in time and space, and thus it may be inappropriate to draw the same conclusions about the significance of similar events in different contexts. For example, in a context characterized by declining population levels, a 1% increase may be considered significant. On the other hand in a context where 20% growth is considered normal, a further 1% increase may be treated as insignificant.

What constitutes significance, therefore, reflects the context in which the judgment is being made, together with the perspective of the person or persons making that judgment.

For each case or impact assessment, what is required is an operational definition of "significant impacts" that reflects the particular context and the perspectives of those individuals and communities likely to be affected by the project in question. Significant impacts, in the sense of whether or not

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[2] Appendices A & B contain the results of the scoping and relevance tree exercises and were written prior to any further research being undertaken.

they are relevant in the context of the project, have been identified by means of the scoping exercise, literature review and relevance tree analysis. Significant impacts, in the sense of whether they should influence project-related decisions, are defined for the purpose of this project in terms of

(i) prototypes,
(ii) perceived significance, and
(iii) system capacity.

If any outcome of the project is determined to meet any one of these criteria, then that outcome is considered to be significant and requires consideration in terms of the project decision making process.

More specifically, the significance criteria adopted are defined as follows:

(i) prototypes - where elements are introduced into a system for the first time and any outcomes of that introduction are treated as significant outcomes. In the context of the tote road project, the introduction of a transportation link between Churchill Falls and Ross Bay Junction represents the introduction of a new system element, which in and of itself is a significant impact particularly from an environmental point of view. Conversely, upgrading the Churchill Falls - Esker Highway link and building an Esker-Ross Bay Junction link would not be significant in this context as transportation links already exist between these points.

(ii) perceived significance - any outcomes of the project identified by the consultant that are perceived to be significant by the community or communities in the impact area, or the decision makers outside the impact area, will be treated as "significant impacts"; and ones which should be considered in relevant project-related decisions. For example, if the tote road is perceived by native groups as likely to disrupt their lifestyle then this perception would be treated as a significant impact, as, irrespective of the eventual outcome, it is a concern.

(iii)system capacity - any outcome which exceeds the current capacity of any systems element will be considered as a significant impact. For example, if demand for accommodation in a particular community, as a result of the project, were to exceed that community's capacity to supply accommodation, then this would be treated as a significant impact.

These criteria are clearly far from perfect. There is, for example, the problem where different members of the community perceive the same project outcome in different ways. In the absence of a consensus, a professional judgement as to the significance of the impact must be made by the consultant. Furthermore there is the question of the reliability of the prediction of the outcome in question. In cases where the reliability of the prediction is low it may be as well to consider the impacts as significant until other information indicates otherwise.

Notwithstanding these and other difficulties associated with the significance criteria specified above, such definitions are essential if impact assessment is to contribute to informal decision making. Hopefully the criteria used here will be useful in achieving this goal.

Requirements for Further Research

The results of both the scoping study and the relevancy tree exercise (See Appendices A and B) highlighted four broad areas requiring more detailed analysis. These impacts fell under the following headings:

- Development Opportunities.
- Effects on Business.
- Regional Integration/Propensity to Travel.
- Innu Concerns.

2.2 Research Design

2.2.1 Introduction

The nature of this study is such that it was necessary to collect two types of data;

(i) data required to describe the existing condition; and

(ii) data required to measure the impacts upon it.

2.2.2 Methods

The research methods used to collect both baseline data and to assess impacts fall into 3 main groups.

(i) Secondary Data Collection

Much use has been made of published data from Statistics Canada in the compilation of profile information. This includes 1981 information on population characteristics, labor force, housing, etc. Although we have updated this where possible, in many cases 1981 data is the most recent available.

In addition, there has been a problem of data availability for the smaller communities, eg. Mud Lake. In such cases we contacted community leaders directly for this information, however, being volunteers, they weren't always able to provide the requested information.

A third problem encountered in the compilation of profile information is that in many cases data is only available at an aggregate level for either the entire province or for Labrador as a whole and it has not been possible or feasible to obtain this data for the Study Area. Such was the case, for example, with motor vehicle registration and fuel tax levied.

(ii) Formal Questionnaire Surveys

In order to obtain data on the possible impacts of the tote road, two formal questionnaires were designed and administered to two groups of Labrador residents. The first of these, designed to assess the impacts of the road on business, was directed to a sample of Labrador business people. Wherever possible the questionnaire was completed by the interviewer while in others it had to be left behind for the interviewee to complete in his/her own time and be collected at a later date.

The second, or resident questionnaire, was designed to assess the impact of the road on personal travel, and was administered as a telephone interview to a random sample of Labrador residents.

(a) Business questionnaire.

The business questionnaire was administered to a stratified random sample of business people in Labrador West, Churchill Falls and Labrador East. The questionnaire requested information on the following topics:-

(i) Description of the business:

(ii) General comments on perceived advantages and disadvantages of the road.

(iii) Types of freight imported, from where, and by what means.

(iv) Location and size of main markets.

(v) Current transport related problems experienced in obtaining and distributing goods.

(vi) Potential impacts of the Tote Road on eg, warehousing and hiring employees.

(vii) Perceived effects of other transportation scenarios on business, eg. all year road link, Trans-Labrador Highway, link to Baie Comeau.

The business questionnaire is included in Appendix D.

(b) Resident Questionnaire

This questionnaire was administered by telephone to a random sample of Labrador residents. The sample was stratified by location. The type of information requested by this questionnaire is listed below and the detailed, formal questionnaire is included in Appendix E.

(i) Personal data

(ii) General comments on the proposed tote road, perceived good and bad points.

(iii) Current travel patterns

(iv) Comments on sense of isolation and potential effects of the road upon it.

(v) Personal use of the Tote Road

(vi) General Comments on other route scenarios ie, link to Baie Comeau, Trans-Labrador Highway.

(c) Questionnaire to Transportation Companies.

Letters were sent to all major carriers providing services within, to, and from Labrador. This letter was accompanied by a questionnaire requesting data on current services and schedules, rates and subsidies, and volumes of freight and passengers carried. In addition, current problems experienced in providing such services were to be documented. Feedback from many of the smaller

companies in particular was disappointing. The major carriers, have provided data however it was rather sparse in some cases, such as in breakdowns of type and volume of goods carried. A copy of the questionnaire used is included in Appendix F.

(iii) Informal Interviews

Both in the assembly of baseline information and in our research into the socio-economic impacts of the tote road, much useful data has been collected through consultation and informal interviews in addition to the more formal questionnaires employed. This is especially so in the case of the business community, managers from mining and transportation companies, and key personnel in various government agencies and departments. A full list of those contacted in this regard is provided in Appendix G.

One of the perceived major impact areas, as identified in the Scoping Study, was the development opportunities which would be created by the tote road. It was suggested by participants that the project would open the way for the development of interior Labrador in such areas as forestry, mining and hydro-development. This is a vision of Labrador held by many. (See Chapter 1). In order to assess this potential for resource development we have consulted with resource managers in Provincial Government departments and resource agencies, in addition to representatives of CFL Co., and mining companies currently operating in the Study Area.

Another major impact area which was researched in this manner was the effect the road might have on the Innu. In this regard, a member of the Study Team, carried out informal interviewing in the community of Sheshatshui. The Innu people were interviewed to assess their opinions on potential impacts of the tote road on their community and way of life. A formal questionnaire was deliberately not used in this instance as it was felt that this would be too formal a situation and that the Innu might, therefore, not feel free to express their true feelings.

2.2.3 Questionnaire Design and Testing

The formal questionnaires which are included as Appendices E, F and G were prepared by leading members of the Research Team and reviewed by the Special Advisor to this Study.

They were subsequently submitted to Project Management and the Department of Transportation for comments and suggestions and several further revisions were made to them.

A pilot study to pre-test the questionnaires was carried out with interviewers being instructed to report any perceived inadequacies or problems with the questionnaire to a member of the Study Team. After the first five interviews had been completed no problems arose and data collection proceeded, with the pre-test interviews forming part of the sample.

2.2.4 Sampling Procedure

(a) Business Questionnaire

The framework for sampling in the case of this survey was the Business Inventory for Labrador prepared in August 1984. The following procedures were followed in drawing a sample of Labrador businesses:-

(i) Businesses which were more concerned with serving the tourist market and which were interviewed as part of the Tourism Study were isolated from the original list of businesses.

(ii) Businesses directly involved in providing transportation services only, were also isolated. These businesses, eg. trucking firms, were all contacted directly in the collection of data to describe the current transportation system and the effects the tote road would have upon it.

(iii) All remaining businesses were classified according to number

of employees. Included in the sample were all businesses in the Study Area with 10 or more employees, i.e. 38 out of 241. From the remaining small businesses, many of which are personal service and retail outlets (eg. hairdressers and fast food outlets), a 10 percent random sample was drawn from Labrador West and East.

(iv) Due to the nature of Churchill Falls where almost all business is performed/controlled by CFL Co., all businesses in this community were sampled.

The total number of businesses and sample size for each of the Study Area communities are shown below. The final sample size of 63 is approximately 25% of the total number of businesses from which the sample was drawn. It is, of necessity, weighted towards larger businesses in the area.

Location	Total # of Businesses Employees	# with 10 or more Businesses	10% sample of of small	Total Sample
Churchill Falls	4	1	3	4
HVGB	95	20	8	28
Labrador City	87	12	8	20
North West River/ Shesh.	12	0	2	2
Wabush	43	5	4	9
TOTAL	241	38	25	63

63 = 25% of 241 (approximately)

The questionnaire designed to assess the effects on business was administered by three interviewers in Labrador, each of whom was familiar with the Study

Area and the project itself. Both the questionnaire and instructions to interviewees are included in Appendix D.

Out of an original sample of 63 businesses a total of 49 completed questionnaires were returned. This represents 20 percent of the total number of businesses from which the sample was drawn.

(i) Resident Survey

This questionnaire was administered by telephone to a random sample of Labrador residents. The sample was stratified to accommodate the concentrations of population, namely, West (Labrador City, Wabush); Central (Churchill Falls); and East (Happy Valley/Goose Bay, Northwest River, Sheshatshui and Mud Lake). The approximate 95% confidence interval for an estimate of a proportion (p), using random sampling, is:

$$p \pm 1.96 \sqrt{\frac{p(1-p)}{n}},$$

or $\pm e$

where n is the sample size. Thus, to obtain an estimate within e%, we choose a sample size using the formula:

$$n = p(1-p)/(e/1.96)2$$

where: it was assumed that $p = 0.5$

and: e(error) = 15% could be tolerated for the East and West regions, and e = 20% for the Central region.

This yielded a sample size of 43 for each of the West and East regions and a sample size of 24 for Central. Replacement sampling was permitted to account for refusals or numbers which could not be reached.

Survey returns were as follows:

Location	Sample Size	Returns
Labrador West	43	43
Churchill Falls	24	20
Labrador East	43	41
TOTAL	110	104

2.2.5 Data Collection

Data collection began in January and was ongoing until October, with the assembly of much published and unpublished information to describe the 'existing condition' in the Study Area. The questionnaire design took place during the month of June and all interviewing was completed in late June and July. Supplementary information from the public information sessions in May and September was also incorporated in the report.

The Study Team consisted of two principal investigators, a special advisor, an Anthropologist who carried out research work in Sheshatshui and five interviewers. The Labrador interviewers were all local residents with a good knowledge of their particular area and of the research project itself. They were thoroughly briefed by the Study Team prior to the field work.

They were:

Mrs. Peggy Lough - Labrador West
Mrs. Noreen Heighton - Churchill Falls
Miss Caroline Bruss - Churchill Falls
Mr. Douglas Jackson - Labrador East
Mrs. Kathy Boles - Labrador East

The function of the principal investigators, in addition to supervising the

interviews, was to carry out much of the informal interviewing and consultation work described earlier.

Public Open Houses were held as part of the tote road EIS work in each of the areas involved so many people interviewed were well aware of the project and had already formed strong opinions as to its possible implications.

Response to the questionnaires was quite good although some of the business people could not be contacted or found little time in their busy schedules to answer the questionnaire.

2.2.6 Data Analysis

A total of 49 business questionnaires were returned for analysis. This represents approximately 20 percent of the total number of businesses from which the original sample was drawn. In the case of the resident questionnaire, 104 out of 110 questionnaires were completed. This figure is high as replacement sampling was permitted.

A structured questionnaire was sent to eleven transportation companies/carriers, operating in the following modes:

3	air	3	marine
1	rail	4	road

Returns were disappointing, with none of the trucking companies replying formally. Four completed questionnaires were returned. In some cases, companies were unable to release data on volumes of goods carried. To compensate for the low response rate, we conducted telephone and/or personal interviews where possible.

The completed questionnaires were coded. Frequency distributions were then produced for each variable for

(i) the total sample and

(ii) each of the three locations.

The examination of the frequency distributions for each variable, as well as the nature of each variable indicated the appropriate type of subsequent analysis. Due to the nature of the data, analysis was restricted to descriptive and non-parametric statistical techniques.

CHAPTER 3: THE EXISTING CONDITION

3.1 The Study Area

The proposed tote road will connect Labrador City and Wabush, two of the largest communities in Labrador, with Churchill Falls as part of a future Trans-Labrador Highway. At present there is no direct road link between them or between Labrador West and the Goose Bay area. Labrador City is served by air and rail to Sept Isles and Schefferville, Quebec and by rail to Esker (via Ross Bay Junction). A gravel road connects Churchill Falls with Esker and a poor quality tote road, which is closed during the winter months, leads eastwards from Churchill Falls to Goose Bay.

The Goose Bay area is served by air and port facilities in addition to the road to Churchill Falls noted above.

With the completion of the Labrador tote road there will be for the first time, a direct road connection (in the summer months) between all the Study Area communities.

The Study Area, for the purposes of the socio-economic study, includes the communities of Labrador City and Wabush in the West; Churchill Falls in the centre and Happy Valley/Goose Bay, Mud Lake, Northwest River and Sheshatshui in the East (see Figure 1). These will be referred to subsequently as Labrador West, Churchill Falls and Labrador East respectively.[3]

Both the proposed and alternate routes for the tote road cross the Labrador Plateau which forms part of the Canadian Shield. The area is relatively flat and most of the land is between 1,000 and 2,000 feet above sea level. The region is an area of lakes, bogland, barren rock and scrub timber. It is the habitat of many birds, game and fish and offers potential for recreational

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[3] All tables appearing in the report use this definition of Labrador East and West.

development. The soils of the area are primarily glacial tills. Eskers, composed of sand and gravel, are a frequent landscape feature.

3.1.1 Historical Development

The development and spread of settlement in the Study Area has not followed any one pattern which could be said to describe the historical development of Labrador. Rather each sub-region, due to its location, raison d'etre, and the availability of transportation services in the past has had its own unique pattern of growth.

The earliest inhabitants of Labrador were the native peoples. The Innu were a nomadic society who travelled for centuries in hunting groups, with several groups making up a band. Each band would gather periodically during the year. With the coming of the European fur trade in the 1600's, these gatherings increasingly took place at fur trading posts. By the twentieth century, these posts were located predominantly on the coast. As the posts became small villages, the Innu spent increasingly more time there and the nomadic way of life gradually changed to a more urbanized life style and less frequent trips were made into the interior. The Innu community of Sheshatshui originated in this manner.

The vast area of land flooded by CFL Co in the 1960's to accommodate the Churchill Falls hydro facility reduced the area of land traditionally travelled by the Innu.

The 1600's also brought European settlers to coastal Labrador, attracted by the commercial fishery. Mission posts were established in the Northern Coastal communities where the native population was living.

The population remained more or less static and no major development occurred until 30 years ago when the military airport facilities were constructed at Goose Bay. Since the 1950's and early sixties, population growth has increased rapidly with the opening and development of iron ore mining in Western Labrador and the development of hydro-power on the upper Churchill

River.

The population growth in Labrador West is of recent origin (1950's) and directly related to the development of iron ore mining and fluctuations in the world market for this product. Churchill Falls is a company town which houses employees of the Churchill Falls Labrador Corporation engaged in the maintenance and operation of the large hydro-electric generating facility.

The Town of Happy Valley/Goose Bay in the East dates from the early 1940's when the first families arrived to begin construction of the airbase. The population expanded with increases in activity at the base, eg. in 1951, '54 and '64. The withdrawal of the USAF in July, 1976 led to a slight decline in population at that time. However, some stability in population has been granted by the location of many regional government facilities in the town and its function as a regional service centre for the Labrador coast.

Before Happy Valley/Goose Bay existed, Northwest River was the main regional centre, with health care and schooling links to coastal communities. It was first established as a trading post in 1743. Both Innu and White people have inhabited the site since that time. The Innu used it as a summer campsite until the late 1950's, when a permanent settlement was established. Separate Innu (Sheshatshui) and Settler (Northwest River) administrative communities were established, in 1979, although joint services such as fire protection between the two remain.

Mud Lake was established in the early 1800's as a community of trappers and fishermen. Since the 1940's a segment of the work force has commuted across Lake Melville to work in Happy Valley/Goose Bay.

3.2 Demographic Characteristics

3.2.1 Population Size and Change

(i) The Region

An examination of Tables 3.1, 3.3 and 3.4 shows that the only communities in the Study Area which have undergone a steady pattern of population growth over the last 10 years are the smaller communities of Sheshatshui and Mud Lake. In all other locations the absence of a diversified economic base has meant the population has been subject to changes caused by rapid increases or decreases in the local demand for labor. These sudden increases and decreases have been met by both in and out migration at these locations. The sudden decline in the world demand for iron ore and competition from foreign markets, the pull out of the USAF from HVGB and the completion of construction on the hydro-electric generating facility at Churchill Falls, are all portrayed by rapid declines in population from 1976 onwards. These trends are discussed in more detail below.

(ii) Labrador West

The region designated as Western Labrador includes Labrador City and Wabush, located just three miles apart on opposite shores of Little Wabush Lake. Both communities rely heavily on the iron ore industry for their existence. Population counts for the sister communities are given in Table 3.1, according to Census findings.

Table 3.1 Population Change, Labrador City and Wabush

	'71 pop.	'76 pop.	%change	'81 pop.	%change
Labrador City	7,625	12,012	57.53	11,538	- 3.95
Wabush	3,385	3,769	11.34	3,155	-16.29

Examining the above table, it is evident that both communities have followed similar demographic trends. Labrador City and Wabush each experienced population increases over the '71 to '76 period following the Iron Ore Company of

ion increases over the '71 to '76 period following the Iron Ore Company of Canada and Wabush Mines expansions due to the growing demand for iron ore on world markets. From '76 to '81 both towns decreased in population because of a glut of iron ore on the world market and the resultant closure or slow-down of operations in the mining industry.

The latest population estimates for Labrador City and Wabush, as inferred from 1984 Family Allowance data, are 10,832 and 2,968 respectively. This demonstrates a drop in population since 1981 of 6.1% for Labrador City, and 5.9% for Wabush. Again, these declines are directly linked to the condition of the iron ore mining industry and related employment opportunities. Both towns are unfortunately suffering from considerable out-migration because of the loss of jobs resulting from low market prices for iron ore.

Table 3.2 highlights the major growth periods in the development of Labrador City and shows how closely related it has been to the fortunes of the mining industry and related employment opportunities.

Table 3.2 Labrador City: Population Growth 1961 - 1984

Year	Total	% Growth
1961	386	+1204.9
1966	5,037	+ 51.0
1971	7,622	+ 57.6
1976	12,012	- 3.95
1981	11,538	- 6.1
1984[4]	10,832	

In the period 1976-1981, population growth in the town reversed for the first time, due entirely to out-migration. An examination of birth and death statistics for this five year period show that natural increase contributed 1696 people to the population of the city - 1772 live births and 76 deaths. The population decrease of 474 during this time period in reality is the difference between 1696 due to natural increase and 2170 due to out-migration.

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[4]Data obtained from the Newfoundland Statistics Agency

A similar pattern has been followed in Wabush.

Churchill Falls

Table 3.3 provides census population findings for Churchill Falls.

Table 3.3 Population Change, Churchill Falls.

'71 pop	'76 pop	%change	'81 pop	%change
2,615	956	-63.44	936	-2.09

A dramatic population decline occurred between '71 and '76 when the total number of residents dropped at an average annual rate of around 12.7%. However, this was at the end of the peak period of construction of the hydro-electric plant. When construction was completed, most of the employees moved away, and only those involved in operating and maintaining the plant remained. The population drop is thus accounted for through out-migration. A further decline of 2.09% was experienced from '76 to '81. The most recent population estimate for Churchill Falls, as provided by the Town Manager, is 847. Churchill Falls has experienced a slow, yet steady rate of population decline since 1976, which is largely attributable to a slowdown and lay-offs by CFLCo. Most people today are engaged in the maintenance and operation of the facility and population totals for the town are expected to remain fairly stable.

Labrador East

Happy Valley/Goose Bay is by far the most prominent community in Labrador East, upon which the three remaining communities are very dependent for goods, services, and other necessities. Mud Lake is located seven miles to the southwest. North West River and Sheshatshui are sister communities located on opposite banks of the North West River. Available census population counts are provided in Table 3.4.

Table 3.4 Population Change, Labrador East

	'71 pop	'76 pop	%change	'81 pop	%change
HVGB	6,525	8,075	+23.75	7,103	-12.04
NWR	835[5]	579	-37.71	515	-11.05
SHESHATSHUI		453		503	+11.0
MUD LAKE	86	70	-18.6	72	+ 2.9

No independent population counts are available for Sheshatshui in '71. The most recent demographic estimates for all four communities in the Lake Melville area ,taken from 1984 Family Allowance statistics, place the population of Happy Valley/Goose Bay at 7,310, North West River and Sheshatshui combined at 940, and Mud lake at 77. Thus, an approximation of total population of the entire region is 8,327 people.

The decline in population between 1971 and 1976 in Happy Valley/Goose Bay is directly attributable to the withdrawal of the USAF. Recent plans to upgrade the airport and facilities at an estimated cost of $92 million dollars and the Department of National Defense proposal to establish at NATO Training Base there (potential for 1500 personnel) would help to stabilize or increase the population of the area.

3.2.2 Age/Sex Structure

Table 3.5, showing the breakdown of the population in each community by age group for census years 1971 and 1981, reveal some interesting characteristics about the population.

As a general overview it can be said that the Table displays a youthful population. In comparison to 1981 figures for the province as a whole all of the Study Area communities have a greater percentage of children in the 0-4 year age category and fewer in the over 65 category.

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[5]North West River and Sheshatshui combined.

As an example, Labrador City in 1971 had 94% of its population in the under 45 year age group, while in 1981 this had only dropped to 91 percent. Provincial figures indicate 78% of the population under 45 in 1981.

Table 3.5 Population by Age Group, Study Area Communities

	Province	Labrador City	Wabush	Churchill Falls
0-4				
1971		17.52	18.32	6.67
1981	8.7	13.02	9.5	212.37
5-14				
1971		23.10	20.83	13.71
1981	21.2	22.33	26.98	24.22
15-24				
1971		21.33	21.56	20.19
1981	20.0	19.86	15.55	18.28
25-44				
1971		32.22	33.97	36.57
1981	27.4	36.61	38.26	36.03
45-64				
1971		5.51	12.40	20.58
1981	15.5	7.40	9.05	16.65
65+				
1971		0.33	0.15	2.29
1981	7.0	0.78	0.64	2.69

	Happy Valley/ Goose Bay	North West River	Sheshatshui
0-4			
1971	16.39	14.67*	14.67*
1981	9.80	10.10	15.00
5-14			
1971	29.78	30.43*	30.43*
1981	24.03	17.17	28.00
15-24			
1971	18.14	17.39*	17.39*
1981	21.78	20.20	27.00
25-44			
1971	27.03	21.19*	21.19*
1981	31.43	27.27	23.00
45-64			
1971	7.35	11.42*	11.42*
1981	10.92	16.16	6.00
65+			
1971	1.30	4.89*	4.89*
1981	2.05	9.09	1.00

* Census findings for North West River and Sheshatshui were combined for the 1971 Census.

(No Data Available for Mud Lake)

Source: Census Canada

The percentage of children (under 14) dropped slightly during that time period - from 40.6% in 1971 to 35.3% in 1981. Figures would tend to indicate a slight maturing trend in the population with a small increase in the number of elderly people and a decrease in the number of young children. Similar trends are apparent in HVGB where the percentage in the 0-14 age group has dropped from 46% in 1971 to 33% in 1981. The community of Sheshatshui has the largest percentage of its population in the under 14 age group (43% in 1981). Families average 5.1 persons which is larger than the provincial average. There are comparatively few people in the older age groups.

The young, maturing population in these communities indicates a large group of young people who will be entering the labor force within the very near future and who will require employment opportunities.

3.2.3 Education Levels

Table 3.6 gives information on the education levels of the Study Area population by community for 1981. For purposes of comparison, similar information is displayed for the province as a whole. There is no published census information available for either Mud Lake or Sheshatshui.

Table 3.6 Education Levels - Study Area and Province

	Lab. City		Wabush		HVGB		NWR		Ch. Falls		Prov.
Schooling	Num.	%	Num.	%	Num.	%	Num.	%	Num.	%	%
> Grade 9	710	6.15	145	4.60	1180	16.61	95	18.45	45	7.37	21.27
Grades 9-13											
W/O Cert.	2035	17.64	540	17.12	1330	18.72	80	15.53	150	24.59	20.17
With Cert.	1305	11.31	385	12.20	535	7.53	20	3.88	100	16.32	7.10
Trade Cert. or Diploma	270	2.34	105	3.33	225	3.17	5	0.97	30	4.91	1.47
Other Non-Univ. Educ.											
W/O Cert.	255	2.21	30	0.95	170	2.39	20	3.88	25	4.09	2.11
With Cert.	1825	15.82	500	15.85	705	9.93	70	13.59	140	22.95	9.28
University											
W/O Degree	605	5.24	155	4.91	290	4.08	35	6.80	85	13.93	5.17
With Degree	410	3.55	130	4.12	245	3.45	20	3.88	35	5.73	3.25

The Table indicates that Labrador West tends to be at or near the Provincial average in education standards. Wabush, for example, has only 4.6% of its population with less than Grade 9 education. Happy Valley/Goose Bay and North West River are about average for the Province. Worthy of note is that HVGB shows 3.17% of its population with a trade certificate or diploma compared with

1.47% for the Province.

3.3 Housing Characteristics

3.3.1 Numbers and Types of Dwellings

Due to the recent origin and development of most of the larger communities within the Study Area, housing is relatively new and for the most part in good condition. The majority of homes are single family detached homes but there is a fair amount of rental and apartment accommodation available throughout.

Housing types in Labrador West include a wide range of accommodation ranging from single family detached homes to bunk-houses built by IOCC and Wabush Mines. Table 3.7a shows major housing characteristics by community.

In 1981 there were 3110 occupied private dwellings in Labrador City. Of this total, 2210 or 71% were owned and 900 or 29% were rented. Recent data from the Mortgage Insurance Company of Canada indicate an increase in the number of vacancies in the Labrador City/Wabush area as a result of lay offs at IOCC and Wabush Mines. It is estimated that as of May 1st there were 54 vacant NLHC houses in the two communities. The Mayor of Labrador City, recently estimated there were a total of about 290 vacant housing units in the community.

Table 3.7a 1981: Housing Characteristics by Community[6]

(A)	Number of Occupied Private Dwellings	% Owned	% Rented
Labrador City	3,110	71%	29%
Wabush	825	64%	40%
Churchill Falls	260	2%	98%
Happy Valley/ Goose Bay	1,830	45%	55%
North West River	155	81%	19%
Sheshatshui	80	87%	13%
Mud Lake[7]	29	98%	2%

(B)	% in need of major repairs	Average Value of dwelling	Average # persons per household
Labrador City	1.70%	$49,274	3.7
Wabush	.04%	$39,612	3.8
Churchill Falls	0	$20,000	3.6
Happy Valley/ Goose Bay	13.00%	$21,517	3.8
North West River	10.00%	$16,601	3.3
Sheshatshui	13.00%*	$9,331	6.2

* This Census Canada number does not agree with the current situation, as noted later in the text.

The Iron Ore Company of Canada formerly owned all housing in Labrador City.

[6]Census Canada

[7]Data not available from Census. Information provided by Mud Lake Improvement Committee.

Several years ago, the 'company town' status disappeared, and the company acceded to pressures to sell their houses and trailers to private citizens and allow a normal real estate market to be established.

Figures from Statistics Canada (1981 Census) show a total of 825 occupied private dwellings in Wabush. Of these, 64% were owned and 40% rented. Only 30 or .04% were in need of major repairs.

Housing in Churchill Falls is almost entirely owned by CFLCo. In 1981 there were 260 occupied private dwellings of which 255 were rented and only 5 owner occupied. All of the occupied residences are in relatively good condition and none of the dwellings were in need of major repairs at the time of the '81 Census. Vacancy rates are very low and are confined to a few trailers and apartment units. The town has no land to sell for building lots, because they are bound to lease agreements with the Newfoundland Government. Housing units are available only for those employed directly or indirectly by CFLCo.

In 1981 there were 1830 occupied private dwellings in HVGB of which 825 or 45% were owned and 1010 or 55% were rented. As in Labrador West a wide range of housing types exists.

North West River had approximately 155 houses in 1981, of which 81% were owned and 19% were rented. There are a limited number of mobile home units but the majority of homes are single detached units.

There are twenty-one (21) year round occupied dwellings in Mud Lake. Eight (8) other houses are used only on weekends or during the summer months. These houses are primarily owned by visiting residents of the Happy Valley/Goose Bay area.

A very different housing picture is presented in Sheshatshui. Of the 65 houses built prior to 1978 (68% of the total) the substantial majority are of substandard construction and are in very poor condition. They are typically small, poorly insulated, without proper foundation, and lacking adequate space for sleeping and washroom facilities.

3.3.2 House and Lot Prices

Information from the 1981 Census on the average value of private dwellings show a wide range in values. At the bottom end of the scale is the community of Sheshatshui with an average value of $9,331. In comparison, homes in Labrador City top the scale with an average value of $49,274.

There is very little up-to-date information available on housing or lot prices. Data from NLHC on lot prices in the Happy Valley/Goose Bay area are displayed in Table 3.7b.

Table 3.7b Lot Prices, Happy Valley/Goose Bay, 1984[8]

Housing Type	Lot Size	Price
1. Semi-detached two story	1500-1600 sq. ft.	$20,000 to $25,000
2. Detached two story	1300-1500 sq. ft	$30,000
3. Four bedroom bungalows	1100 sq. ft.	$28,000 to $30,000

The sale of residential lots by private individuals ranges in price from $2,500 to $5,000 in the Study Area. Refurbished homes sold privately with basic improvements done on them, are offered in the vicinity of $25,000 to $40,000 depending on their condition.

Information obtained from the Department of Municipal Affairs reveals that the average subdivision home in Labrador West, on an approximately 2200 sq. ft. lot would range in price from $20,000 to $25,000. During the last eight years there have been few land sales in the region due to the slow down and layoff at IOCC, and many homes remain vacant.

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[8]Newfoundland and Labrador Housing Corporation

3.4 Economic Activity and Labor Force Characteristics

3.4.1 Economic Activity

(i) Mining

The mining activity in western Labrador is based on the huge iron ore reserves of the Quebec-Labrador Trough. Labrador City/Wabush, and Fermont/ Schefferville in Quebec, owe their raison d'etre to the discovery (1950's) and exploitation of these resources. The mines at Labrador City and Wabush are the backbone of Newfoundland and Labrador's mineral industry, accounting each year since 1970 for over 80% of the total value of mineral production.

The first iron ore shipment was made from the area in 1954. These were, and are today, mainly high grade 'direct shipping' ores containing about 55% iron. Labrador City ores are concentrated in pellets and concentrates before shipping to Sept Isles on the QNS & L Railway. All deposits are mined by the open-cast method.

Peak years of production in the region were achieved in the mid 1970's. Since 1979 production has been declining due to a glut of iron ore on the world market and increased competition from foreign producers.

At the current rate of production, it is estimated that known reserves could last for up to 65 years.

The industry's contribution to provincial Gross Domestic Product was around only 5.5% in 1983. During 1980 and 1981, iron ore production was in the neighbourhood of 28 million tons, down 15% from 1979. For 1983, production was roughly 70% of 1980/1981 levels. The value of 1982 iron ore production is estimated at only 63% of the 1980/1981 value, indicating that the average per unit price of iron ore products fell during 1982 at a time when wages and other costs were rising. This represents a substantial decline, much more than in proportion to the 1981/1982 recession. The iron ore industry is not expected to show much recovery before the mid-to-late 1980's.

The major markets for the iron ore are the U.S.A., Europe, Japan and to a lesser extent Canada. There are no other mining operations within the Study Area. Two discoveries, the uranium deposit at the Kitt's Michelin site and the rare earth deposits at Strange Lake could be developed in future, however neither would likely affect or be affected by the tote road.

3.4.1.2 Hydro-Electric Power Generation

Labrador has tremendous potential for the development of hydro-electricity. Twin Falls, on the Unknown River near Churchill Falls, was the first developed to service the iron ore industry in Labrador West and the construction phase of Churchill Falls. A similar facility was built for the Schefferville Mine at the Menihek Dam. The Twin Falls station, although no longer operating, has a generating capacity of 240,000 hp, while the Churchill Falls plant has a total capacity of 6,000,000 hp, most of which is sold to Quebec Hydro for 3 mills under the original sale contract.

The community of Churchill Falls is operated by the CFL Co. and is a company town geared to the operation and maintenance of the generating sites and control structures in the area. Development has been contemplated of the Lower Churchill by Newfoundland and Labrador Hydro at Gull Island and Muskrat Falls. The road from Churchill Falls to Muskrat Falls was constructed largely due to the hydro development potential. However, at the moment, development is not considered to be feasible.

(ii) Forestry

Throughout the area traversed by the proposed routes for the tote road, there are only low volume stands of timber producing 35m to 105m per hectare. There is very low potential for commercial forestry operations within the area. Therefore, it is expected that forest resources in the area will be used for domestic cutting and recreation purposes.

A pulp wood industry in the Lake Melville area, south of the Churchill

River, has been investigated several times and is currently the subject of some interest. The total allowable cut is approximately 150,000 cords, which could sustain a thermal-mechanical pulp mill in addition to a small sawmill. Proposals have always been to ship the product out of the region by boat.

There are sawmills in the Lake Melville area which are producing mainly for the local market. In the past, operations such as Labrador Linerboard and the Goose Bay Timber Company have exported wood products out of Labrador.

(iii) Agriculture

Commercial agriculture within the Study Area is almost entirely limited to the Upper Lake Melville Area. It enjoys a more favorable climate than most other regions of Labrador. Summer temperatures are higher, winter temperatures are less severe and the growing season is longer. Operations in the area cater exclusively to the local market. Hydroponic and other production techniques are being experimented with, however, it is unlikely that sufficient food can be produced to supply markets beyond the Lake Melville region.

There is no commercial agriculture within the Labrador West to Churchill Falls area. 60 - 70 home garden plots are farmed during the growing season.

(iv) The Fishery

There is no commercial fishing operation within the Study Area. Infrastructure was developed by Michekemau Fisheries Ltd. for a whitefish fishery in the Smallwood Reservoir from near the Lobstick dam. The plan was to market dried whitefish to various points across Canada, and a good deal of effort was paid to developing markets and modifying the product accordingly. The product was to be trucked to the Esker siding and moved by rail to the Quebec North Shore. This would be a summer operation and would depend on truck transportation via the Esker Road. The commercial fishery has never actually operated due to difficulties in determining an appropriate management structure for the operation.

Some concern has been expressed over levels of mercury in fish in the Smallwood Reservoir and the implications this may have on a commercial fishery. From (unpublished) studies done by the Department of Fisheries and Oceans in 1977 and 1978, it was found that mercury levels in Northern Pike and lake trout were higher than those recommended by the Department of Health and Welfare as safe for human consumption. Mercury levels in whitefish sampled at six locations in the reservoir were all found to have mercury levels below the 0.5ppm limit (the range of levels was from .30 - .39ppm). These levels would therefore not prohibit a whitefish fishery. However, lake trout would form a large component of the by-catch of such a fishery and these could not be sold for human consumption.[9]

As mercury levels tend to decline with time, it is assumed that levels in whitefish will not rise to where they could affect the viability of the proposed Lobstick fishery. Secondly, levels in laketrout may lower to the point where they could be sold as a by-product of the whitefish fishery, should that operation be activated.

In Lake Melville, limited catch occurs of sea trout, salmon, and smelt. The major connection with the Labrador (salt water) fishery is that Happy Valley/ Goose Bay acts as a supply centre to the coast and a distribution centre for frozen and fresh fish. The quantities handled in HVGB are currently around 50,000 lbs. per year, which is shipped in from Rigolet and Makkovik. This is a very small percentage of the total catch throughout coastal Labrador. Typically, this has been shipped in by CN Marine and either sold locally or shipped by air to Montreal.

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[9]Interview with R. McCubbin, Dept. of Fisheries and Oceans, St. John's, March 10, 1986.

3.4.2 Total Labor Force: Industrial Divisions

Table 3.8 shows the industrial divisions of the labor force for each of the Study Area communities[10].

Table 3.8 1981 Total Labor Force, Study Area Communities[11]

Industrial Divisions:	Labrador City Number	%	Wabush Number	%	Churchill Falls Number	%
Primary	2,795	54.59	745	54.48	0	0
Manufacturing	90	1.76	5	0.37	0	0
Construction	120	2.34	35	2.56	5	1.27
Transportation, Communication & Other Utilities	205	4.00	70	5.13	240	60.76
Trade	85	1.66	125	9.16	35	8.86
Finance, Insurance and Real Estate	85	1.66	40	2.93	5	1.27
Community, Business and Personal Service	965	18.85	290	21.25	100	25.32
Public Administration and Defence	120	2.34	55	4.03	10	2.53
Not Applicable	105	2.01	20	1.44	20	4.76
TOTAL	5,225	87.20	1,390	99.91	420	104.77

[10]Data not available for Mud Lake.

[11]Census Canada

Table 3.8 continued:

Industrial Divisions:	Happy Valley/ Goose Bay Number	%	North West River Number	%	Sheshatshui Number	%
Primary	65	2.16	20	10.26	10	7.14
Manufacturing	80	2.66	0	0	40	28.57
Construction	170	5.65	10	5.13	5	3.57
Transportation, Communication and Other Utilities	495	16.45	20	10.26	0	0
Trade	350	11.63	10	5.13	5	3.57
Finance, Insurance and Real Estate	60	1.99	0	0	0	0
Community, Business and Personal Service	930	30.90	110	56.41	65	46.43
Public Administration and Defence	860	28.57	25	12.82	10	7.14
Not Applicable	80	2.60	0	0	5	3.57
TOTAL	3,080	100.01	195	100.01	140	96.42

As can be seen from Table 3.8, there are quite distinct differences between Labrador West, Churchill Falls and Labrador East. Economic activity in Labrador City and Wabush is dominated by the mining industry and over half the total labor force is employed in the primary sector in these two communities. The community business and personal service sector employs a smaller percentage of the labor force in Labrador West than in any other part of the Study Area.

In Churchill Falls it is the trade, communications and utilities sector which accounts for the greatest percentage of the labor force (61%). Labrador

East presents a very different picture again. Here there is much more diversity of employment with no one sector dominating the local economy, as is the case in the other parts of Labrador. The location of government functions in the Happy Valley/Goose Bay area and the steady growth of the service sector are reflected in relatively high percentages of the labor force employed in these two sectors - 29 and 31 percent respectively.

These labor force characteristics are discussed in more detail below together with notable changes in the sectoral breakdown over time.

(i) Labrador City

In 1981 Labrador City had a total labor force of 5235 of which 3495 were males and 1740 females. The participation rate for males at that time was 89.7 percent while for females it was only 49.2 percent. The inequality between male and female workers is not uncommon to a single resource town such as Labrador City where male oriented jobs usually dominate. A comparison of participation rates for 1971 and 1981 shows that the situation for women has improved over that time period with a rate of 27.5 percent in 1971 and 49.2 percent in 1981. This is a reflection of the expansion of jobs in the service sector to meet the needs of a rapidly growing population.

Examination of the unemployment rates for Labrador City for 1981 shows the same disparity between male and female workers. Of those in the labor force 2.0 percent of males and 18 percent of females were unemployed at the time of the Census.

These unemployment rates for males mask the decline in the mining industry during the last six years or so because many of those made redundant by lay offs have already left the area in search of work.

Table 3.9 shows the breakdown of the total labor force by major industrial divisions for 1971 and 1981.

Given the fact that the town has owed its origins and growth to the

development of the iron ore resources of the region it is not surprising that over 50% of the labor force is engaged in primary industries. Trade, community business and service industries are the only other important industry divisions in Labrador City. There has been little change in this breakdown of the labor force over the last decade. Figures show a slight decrease in the % employed in primary industries and a small increase in the % employed in trade.

Table 3.9 Industrial Divisions, Labor Force, Labrador City, 1971; 1981[12]

	1971	%	1981	%	% Change
Primary Industries	1480	59.08	2795	54.59	-4.49
Manufacturing Industries	65	2.59	90	1.76	-0.83
Construction Industries	165	6.59	120	2.34	-4.25
Transportation Communication and Other Utilities	55	2.20	205	4.00	1.80
Trade	230	9.18	740	14.45	5.27
Finance, Insurance and real estate	35	1.40	85	1.66	0.22
Community, Business and Personal Service Industries	440	17.56	965	18.85	1.29
Public Administration and Defence	35	1.40	120	2.34	0.94
Not Applicable	255		10		
TOTAL	2750		5225		

(ii) Wabush

A similar breakdown of the Wabush Labor Force is shown in Table 3.10.

As in Labrador City, it is the mining industry which dominates the employment scene in Wabush, although there was a decrease of 55 people or 15% employed in mining between 1971-1981.

Employment in mining has declined steadily since 1979, the year of peak

[12]Census Canada

production. In 1979 IOCC had, on average, a total of 2,832 employees while Wabush Mines had a total of 824. This brought the number of direct jobs in the Western Labrador iron ore industry to 3,656 in that year. Current employment at Wabush Mines is 625, indicating a loss of 198 positions through layoffs, attrition and early retirement. For IOCC, employment as of November 1983 was 1450, a reduction of 1,382 in the size of their work force. In all, a total of approximately 1,500 jobs have been eliminated in the iron ore industry, reducing the total to 58% of the 1979 figure. The majority of these jobs were lost in 1982-83.

Apart from the decline in the numbers employed in the mining industry, the employment picture in Wabush has remained fairly stable over this time period. The number of jobs in the service sector is smaller than would be expected for a town of this size, but this is not unusual in a single industry town. There are several factors which have contributed to this characteristic and which apply to Fermont and Labrador City as well. First of all, many mine support industries have established themselves in Sept Isles, eg. the QNSLR head offices. Secondly, the people of Labrador West frequently shop outside their local communities. Finally, the isolated, closed and relatively small market of Wabush and its dependence on one industry has carried a degree of uncertainty for any retail or service venture.

Table 3.10 Industrial Divisions: Labor Force; Wabush, 1971; 1981[13]

	1971	%	1981	%	% Change
Primary Industries	800	69.57	745	54.48	-15.3
Manufacturing Industries	5	.43	5	.37	- 0.06
Construction Industries	15	1.30	35	2.56	1.26
Transportation, Communications and other Utilities	25	2.17	70	5.13	2.96
Trade	75	6.52	125	9.16	2.64
Finance, Insurance and Real Estate	30	2.61	40	2.93	0.32
Community, Business and personal service industries	180	15.65	290	21.25	5.6
Public Administration and Defence	20	1.74	55	4.03	2.29
Not Applicable	145	99.99	20		
TOTAL	1295		1390		

However, as Table 3.10 shows, jobs in the tertiary sector have been increasing - there has been a 5.6% increase in jobs in those employed in trade and transportation. It is possible that with the re-opening of a direct road link between Labrador West and Churchill Falls that the tertiary sector in Wabush will be given an added impetus.

(iii) Churchill Falls

Table 3.11 gives a breakdown of the Churchill Falls labor Force.

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[13]Census Canada

Table 3.11 Industrial Composition Total Labor Force, Churchill Falls, 1971, 1981[14]

	1971	%	1981	%	% Change
Primary Industries					
Manufacturing Industries	10	.75	-	-	-
Construction Industries	125	9.40	5	1.27	-7.13
Transportation, Communication and other Utilities	965	72.56	240	60.76	-12.8
Trade	15	1.13	35	8.86	+ 7.73
Finance, Insurance and Real Estate	10	.75	5	1.27	+ .52
Community, Business and Personal Service Industries	200	15.04	100	25.32	-10.28
Public Administration and Defence	5	.38	10	2.53	+ 2.15
Not Applicable	175		20		
TOTAL	1505		420		

CFLCo. provides housing, shopping, recreation, medical and security services for the residents. Table 3.11 reflects these facts, while comparison of figures for 1971 and 1981 show how employment opportunities have changed as the construction phase wound down and the service sector began to develop.

In 1971, almost 10 percent of the labor force were employed in the construction industry while 73 percent were engaged in the operation of the power plant or held related jobs in transportation.

By 1981 the construction sector had declined to only 1.27% while those employed in transport, communications and utilities had declined by 12.8 percent to 60.7%. In contrast the business and personal service sector showed an increase over this time period from 15% to 25% as some small private

[14]Census Canada

businesses opened in the town and other services were provided by CFLCo.

(iv) Happy Valley/Goose Bay

Table 3.12 depicts the breakdown of the total labor force by major industrial divisions for 1971 and 1981.

There was a considerable loss of jobs in primary industries from 1971 to 1981, more specifically in forestry because of the close down of Labrador Linerboard in 1976. As well, the public administration and defence division shows a similar decline due to the U.S. Military withdrawal. However, community, business and personal service industries indicate by their % change increase that the town is diversifying due to the location of many government departments there and its function as a regional service centre.

Table 3.12 Labor Force by Industrial Division: Happy Valley/Goose Bay, 1971; 1981[15]

	1971	%	1981	%	% +/-Change
Primary Industries	155	8.24	65	2.16	– 6.08
Manufacturing Industries	25	1.33	80	2.66	1.33
Construction Industries	75	3.99	170	5.65	1.66
Transportation, Communication and other Utilities	255	13.56	495	16.45	2.89
Trade	220	11.70	350	11.63	– 0.07
Finance, Insurance and Real Estate	25	1.33	60	1.99	0.66
Community, Business and Personal Service Industries	380	20.21	930	30.90	10.69
Public Administration and Defence	745	39.63	860	28.57	– 11.06
Not Applicable	110	-	80	-	-
TOTAL	2000	99.99	3080	100.01	

[15]Census Canada

(v) North West River

According to the 1981 Census, the total labor force of North West River was 205, of which 125 were male and 80 were female. At that time, the participation rate for males was 69.4%, while for females it was 47.1%. In comparison to the 1971 Census, the participation rate for males improved by 9.8%, and for females by 21.6%, despite the general economic downturn experienced by the town. The unemployment rate for males was high at 28%, but the situation was a little better for females with their unemployment rate of 18.8%. The reason for the loss of jobs and rising unemployment rates in the community is attributable to cutbacks and close downs in the service sector, primarily medical and education, which the residents are so greatly dependent on.

Table 3.13 provides a breakdown of the total labor force with regard to major industrial divisions as documented by the 1971 and 1981 Census findings.

As is evident from Table 3.13, the majority of the North West River labor force (56.41%) fall into the category of community, business, and personal service industries. This comes as no surprise, since the most important employer of the town, the Grenfell Regional Health Services Board, is included under this division. It maintained a staff of 146 in 1979.

It was also the service industry category that yielded the greatest % change from 1971, assuming an even greater percentage of the labor force, when at that time it contained 44.44% of available employees.

Table 3.13 Industrial Divisions, Labor Force, North West River, 1971; 1981[16]

	1971	%	1981	%	% Change
Primary Industries	25	13.89	20	10.26	- 3.63
Manufacturing Industries	5	2.78	-		- 2.78
Construction Industries	5	2.78	10	5.13	2.35
Transportation, Communication, and other Utilities	25	13.89	20	10.26	- 3.63
Trade	20	11.11	10	5.13	- 5.98
Finance, Insurance and Real Estate	-		-		
Community, Business and Personal Service Industries	80	44.44	110	56.41	11.97
Public Administration and Defence	20	11.11	25	12.82	1.71
Not Applicable	40		-		
TOTAL	215		205		

(iv) Sheshatshui[17]

Given a total population of roughly 600, the potential labor force in Sheshatshui may be conservatively estimated at roughly 310. In July, 1985 a total of 49 individuals were engaged in a full time job - 46.9% of them male, 53.1% female. This represents a meagre 16% rate of participation. In all but four cases, these people are employed within the community.

As outlined in Table 3.14, the service sector represents a disproportionately large share (86%) of the existing jobs.

[16]Census Canada

[17]No Census Data Available.

Table 3.14 Current Employment; Sheshatshui[18]

Organization	# of employees
NMIA	2
Alcohol Program	7
Health Council	2
Dept. of Social Services	10
R. C. School Board	16
Grenfell Regional Health Board	2
Band Council	3
TOTAL	42

In addition to full time employment, there is an indeterminate but relatively small number of short term or seasonal jobs created each year. The majority of these are associated with construction, principally the Band Council's Housing Program, and with the Employment Opportunities Program administered by the Provincial Department of Social Services.

With the extremely high rate of unemployment in the community, income levels on average are very low. Certainly a substantial majority of families exist well below the poverty line. They are largely dependent upon transfer payments, especially social assistance, for their cash income.

Urbanization of the Innu has had a number of negative impacts which have probably contributed towards maintaining their poor standard of living. Problems with alcohol usage, the high incidence of crime and poor sanitary conditions are indicators of the struggle which the Innu continue to have in adapting to the white man's urbanized society. Many Innu continue to regard Sheshatshui as a form of 'ghetto' and look to traditional life in the bush, or to new communities such as Lobstick as preferable areas to live.

An important component of the Innu economy is the food and fur harvest, conducted from Sheshatshui as well as the Lobstick community. The Native Resource Use component (Table 2)of the Tote Road Environmental Impact Statement

[18]Field Interviews, D. W. Knight Associates, Summer, 1985.

estimates the annual Innu harvest for the Tote Road area as having a cash value of $152,642. Included in this harvest is large and small game, waterfowl and fish. It does not include the value of furs kept for household use, firewood, wild fruit or materials used for the production of handicrafts. Traditional hunting/trapping/fishing practices continue to be an important component of the Innu way of life, through periodic trips into the bush.

3.4.3 Employment/Unemployment

Table 3.15 shows selected labor force characteristics by community taken from the 1981 census and is the most recent published data available on unemployment. As such these provide a description of this condition at one point in time and may bear little relationship to current rates.

Table 3.15 Selected Labor Force Characteristics, Study Area Communities; 1981[19]

Community	Labor Force Rate		Unemployment Rate		Participation	
	Male	Female	Male	Female	Male	Female
Churchill Falls	280	145	3.6	27.6	93.3	48.3
Labrador City	3490	1735	2.0	18.2	89.7	49.2
Wabush	945	445	2.1	20.2	89.2	47.8
Happy Valley	1925	1160	10.6	18.1	80.0	51.1
North West River	125	80	28.0	18.8	69.4	47.1
Sheshatshui	75	70	20.0	7.1	48.4	48.3

As can be seen from Table 3.16, large fluctuations are apparent from month to month. The drop in unemployment rates and corresponding rise in participation rates in the summer months are due to the increase in construction work and the fishery at this time and to the implementation of federally funded make-

[19]Census Canada

work projects.

Figures for unemployment in Western Labrador were provided by the Canada Manpower Office for March 1985. Again these are only reflective of this condition at one point in time. As of March 31st, 1985, there were 837 people registered as being unemployed in Labrador City, Wabush. Of this total, 380 were male and 457 females. The age breakdown of these unemployed persons is given in Table 3.17.

Table 3.16 Unemployment Rates, Western Newfoundland and Labrador, 1985[20]

Region 030 - Western Newfoundland and Labrador

	L. Force	U. Rate	P.R.
January	49,000	2.8	51.8
February	50,000	28.6	53.4
March	51,000	31.3	54.5
April	51,000	31.5	54.4
May	54,000	32.5	57.7
June	58,000	25.9	61.7
July	62,000	21.5	65.2

Table 3.17 Selected Unemployment Statistics, Labrador City/Wabush March 31, 1985[21]

Total Unemployed	Male	Female
837	380	457
By Age Category	%	
<20	10.3	
20-24	15.3	
25-44	58.7	
45-64	8.6	

[20]Canada Employment Commission.

[21]Canada Employment Commission.

The great majority of those seeking employment were unskilled laborers.

Table 3.18 Selected Unemployment Statistics, Labrador East, March, 1985[22]

	Unemployed Males	Unemployed Females
HVGB	542	483
NWR	103	71
Sheshatshui	87	37

(Data by age category was not available for Labrador East)

3.4.4 Income Levels

Table 3.19 (a) shows average incomes for males for the Study Area from 1979 to 1982. The towns of Labrador City, Wabush, and Churchill Falls enjoy a considerably higher level of income than those of Eastern Labrador. The reason for such regional disparity is of course attributable to the lack of industrial development in Eastern Labrador.

Due to the natural resource wealth of Western and Central Labrador, residents are fortunate to be employed by big companies such as IOCC and CFL Co. Other benefits in Churchill Falls and Labrador West include paid transportation out of the area - (eg. for Churchill Falls, twice a year for each member of the family to St. John's). Big business, and the accompanying high paying jobs are absent in Eastern Labrador. Jobs in this region are lower paying and geared more toward the administrative and service sectors.

[22]Canada Employment Commission.

Table 3.19 (a) Average Wage Income, Tote Road Study Area, 1979 - 1982[23]

	1979	1980	1981	1982
Community:				
Labrador City	$20,146	$21,811	$24,479	$25,272
Wabush	$21,111	$22,658	$24,382	$23,389
Churchill Falls	$18,688	$20,836	$22,285	$24,842
HVGB-				
Mud Lake	$13,938	$15,421	$17,677	$19,064
Sheshatshui	$10,868	$12,045	$13,491	$15,202

As noted earlier, the Native Resource Use study estimates an annual cash value of $152,642 for the hunting/trapping/fishing harvest by the Innu of Sheshatshui. Assuming a total of 188 males in the labor force (62.89 % (provincial percentage of males in labor force) of 300), this would mean an average of $811.92 cash value for each male in the labor force, a significant level of income, considering the average wage incomes noted above.

1983 data obtained from the Income Tax Files gives the ratio of transfer payments to employment income for the regions of Labrador (see Table 3.19 (b). This is for those individuals who filed an income tax form only. Area C includes Labrador City, Wabush, and Churchill Falls, while the other study area communities fall into Area D.

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[23]Newfoundland Statistics Agency

Table 3.19 (b) Ratio of Transfer Payments to Employment Income

Area	Total Income	Total Transfers	Ratio
Province	-	-	21%
C	61.7 million	$ 6.7 million	11%
D	116.4 million	$ 7.8 million	7%

As can be seen from Table 3.19 (b), both areas in Labrador have a lower dependence on transfer payments than the province as a whole and area D - Labrador City, Wabush, Churchill Falls has a lower ratio than the HVGB area. Figures for coastal Labrador, by comparison, jump to the 40-50% range. Transfers include unemployment insurance, family allowance, child welfare, old age pension and Canada pension.

Data obtained from the Department of Social Services for December 1985 shows the number of families on social assistance at that time (see Table 3.19 (c). The outstanding feature of the table is the extremely high dependence of Sheshatshui on social assistance payments.

Table 3.19 (c) Social Assistance: Case Load December 1985.

Community	Number of Families
Labrador City	41
Wabush	6
Churchill Falls	3
Happy Valley/Goose Bay	165
Mud Lake	4
North West River	20
Sheshatshui	108

The Provincial and Federal Governments pay a northern allowance to its employees. The provincial (annual) allowance is $2100 for married and $1050 for single employees. The Federal allowance exceeds that of the Province. However, it is more difficult to calculate as it is determined by an index made up of a number of factors, including isolation. Building of an all season highway link in Labrador may alter the allowance; the amount however is

undetermined at this time. While no figures are available, Federal employees in St. Anthony received certain reductions in their isolation allowance following completion of the Northern Peninsula Highway.

3.5 The Innu Community

3.5.1 History

The origins of Sheshatshui as a settlement site date back to 1743 when a trading post was established there by Louis Fornel. A succession of firms (Marcoux and Domanter Associates, the Hudson Bay Company, Revillion Freres, the HBC again) have maintained the trading operation continuously through to the present day.

The site itself, a narrows where the North West River empties into Lake Melville, had traditionally been occupied by the Innu (Naskapi and Montagnais Indians) as a summer campsite. Throughout the remainder of the year they would be dispersed about their hunting grounds in the interior of Labrador, especially in the vicinity of Lobstick and Michekemau Lakes (now flooded and part of the Smallwood Reservoir).

While the Innu's attachment to the site was strengthened by the economic ties which trade prompted, and later the religious ties fostered by the Catholic Church, it remained merely a summer campsite until well into the present century. During the 1950's, the provincial government constructed a number of wood frame houses for their benefit. By the end of the decade, the majority of families had largely abandoned their traditional nomadism and taken up quasi-permanent residence in the village.

As noted in Section 3.4.2, adaptation to an urbanized lifestyle has not come easily to the Innu people. Medical, educational and other public services are essential elements of modern day living, along with employment opportunities, transfer payments, and other elements of urbanized settlement. However, ties with the land remain strong with the Innu.

3.5.2. Social and Demographic Characteristics

(i) Population

Constructing a current demographic profile of Sheshatshui is difficult as there is no readily available data more recent than the 1981 census. The total population established by that enumeration, 505, is likely inaccurate. An earlier study conducted in 1979 identified a total of 525. Since there is little if any out-migration from the community, it is highly unlikely that a net loss was incurred in the interim. The current population may be estimated at roughly 600.

There is a comparatively high rate of birth in Sheshatshui. Families average 5.1 persons; 42.4% of the total population is age 14 and under. Given this and the minimal out-migration, the population of the village will likely increase rapidly in the years ahead.

(ii) Land Use and Controls

While the Innu families of Sheshatshui maintain a permanent residence in the village, many continue to pursue an extensive land use pattern, as is characteristic of their traditional lifestyle. Individuals hunt and trap small game in the general vicinity of the village. Since the majority of houses are heated by wood stoves, there is also a considerable harvest of firewood throughout the winter, principally from the forests bordering the road to Happy Valley/Goose Bay.

Over the fall and winter months many families are largely absent from the village. Some camp in the woods along the Goose Bay road, where wood and game are more accessible. Others, utilizing aircraft charters organized by the Band Council, camp in the interior of Labrador where they have ready access to caribou.

In keeping with their traditional communal system of land tenure, the Innu recognize no proprietary interest to land and resources among themselves. They freely share their harvest. They are however, much to their resentment, subject to a variety of provincial and federal regulations and restrictions regarding their use of wildlife resources.

Within the community there are no explicit controls over land use such as zoning regulations (aside from the designation of a new housing subdivision). In the absence of any commercial or industrial activity, there is little need for such controls.

(iii) Economic Base

The cash economy of Sheshatshui is extremely dependent upon exterior sources of funds - transfer payments such as social assistance, UIC, pensions and tax credits, and government employment and development programs (as outlined below). The private business sector is confined to a single retail outlet, a single car cab operation (both operated by non-Innu) and an Innu consulting firm (located in Goose Bay).

A few women derive a small income from the local sale of crafts. Also, a few men harvest furs for sale. In both cases the income earned is purely supplemental.

The principal source of monies is government funding allocated under the Federal Provincial Native Agreement. As one of the seven "designated communities" in Labrador covered by the Agreement, Sheshatshui receives an annual allotment to cover various budget programs developed by the Band Council. Expenditures for fiscal year 1984-85 were as follows:

Housing (new construction)	$445,000
Outpost Program (aircraft charters)	130,000
Community Garage	121,600
Office Renovation	113,600
Community Services (garbage collection, snow clearing, maintenance of public	

wells)	104,500
Water and Sewer (design study)	80,000
Core Funding (council staff)	53,000
Equipment Repair	25,000
Recreation	5,000
Miscellaneous	22,900
TOTAL	$1,100,000

It is important to note here that, second only to housing, the Council's major priority is the 'outpost program'. The aircraft charters arranged by the Council provide Innu families the transportation needed for them to pursue their traditional lifestyle in bush camps in the interior.

Combined with the Churchill River Road, the tote road would make accessible large areas which can now only be reached by aircraft. Road access in the minds of some Innu represents a threat to their traditional hunting grounds and further invasion of the white man's culture. Positive aspects of increased access however include having easier and cheaper passage to hunting areas and the potential for more travel and employment opportunities.

In recent years (1980+) there have been a few other federally funded projects initiated, specifically a sawmill operation (LEAP funding) and a craft workshop/retail outlet (Canada Works). Both failed, chiefly on account of management and marketing problems. A third project, Michekemau Fisheries, was a LEAP funded effort to establish a commercial whitefish harvest on the Smallwood Reservoir. At its height the fishery employed between 12 and 15 people, and supported a small village of over a hundred Innu. The project is now dormant for lack of further funding. As noted in Section 3.4.1, the presence of mercury in fish populations of the Smallwood reservoir and particularly in lake trout, may prohibit the sale of the by-catch should the project be re-activated.

Provincially, the Department of Social Services administers an employment program, designed to qualify recipients of social assistance for UIC benefits.

Underlying the cash economy of Sheshatshui is an informal subsistence economy, typical of northern Native communities, which persists as an integral part of Innu life. Their harvest includes a variety of resources; waterfowl, small furbearers, fish, berries and, above all, caribou. This continuing harvest expresses a range of values fundamental to the traditional Innu lifestyle. It also represents an important component of many families' income, insofar as its cash or replacement value is money most simply do not have.

(iv) Housing

The standard of housing in Sheshatshui is extremely poor, in comparison with any other community in Labrador East. Aside from the residences assigned to the priest, nuns and teachers, there are a total of 96 private dwellings in the village, with an average occupancy of 6.25 persons.

The following shows when these dwellings were built.

Period of Construction	# of Houses
1946 - 1960	25
1961 - 1970	15
1971 - 1977	25
1978 - 1984	31

Of the 65 houses built prior to 1978 (68% of the total) the substantial majority are of substandard construction and are in very poor condition. They are typically small, poorly insulated, without proper foundation, and lacking adequate space for sleeping and for washroom facilities.

Most of those houses constructed during the most recent period are of an appreciably better standard. They are mostly of solid construction, and include 2 - 3 bedrooms and a concrete foundation. Some are serviced by individual wells and septic tank systems.

The current housing construction program is administered by the Band Council with funds provided under the Native Agreement. Costs are rather high, between $64,000 and $70,000 per unit in the case of those built during 1984. There is no cost involved in the provision of housing lots however, the survey costs are assumed by the provincial government's Department of Rural, Agricultural and Northern Development (which administers the Agreement).

3.5.4 Support Services

(i) Transportation and Communication

The people of Sheshatshui have access to the same transportation network as that available to the other residents of the upper Lake Melville area.

Sheshatshui is similarly covered by the CBC radio and television transmission from Happy Valley. Also, as mentioned, the community has its own radio transmitter.

(ii) Community and Social Services/Facilities

Health

The Grenfell Regional Services Board operates a clinic located in North West River, which serves both communities. It is staffed by one doctor, a receptionist and several nurses, including an Innu translator/nursing assistant. Where required, patients are referred to the Melville Hospital in Goose Bay.

In terms of public health, the people of Sheshatshui exhibit a number of problems often found in Native communities. There is a high level of alcoholism and drug abuse. While this may be viewed as more of a social or community problem rather than an explicitly clinical one, there are often medical implications. There is a high incidence of infections - ear, chest, skin and respiratory - particularly among the young. This may be attributed to various socio-economic factors, including low levels of education, poor hygiene and nutrition.

Law Enforcement

The community is served (together with North West River) by a squad of three officers from the RCMP detachment in Happy Valley/Goose Bay.

Officers report that the frequency of criminal infractions is extremely high in Sheshatshui, relative to the other communities in the upper Lake Melville area. For example, while Sheshatshui is perhaps slightly larger than North West River, officers estimate that it accounts for 85 to 90% of their work load in the two communities.

Of the various types of infractions requiring police intervention, assault and crimes against property predominate. Officers estimate that upwards of 90% of all incidents are alcohol related.

Education

The Roman Catholic School Board operates an all grade school in Sheshatshui. There is a staff of 24, including 19 teachers, two of whom are Innu, and 5 teacher's aids, all Innu. Total enrollment is presently 212: 20 in kindergarten, 132 in grades 1 - 6, and 60 in grades 7 and up.

In addition, there is a Job Readiness Training Program, funded by CEIC. While the facility is located in North West River, the program is specifically designed for the benefit of the Innu in Sheshatshui. It is staffed by three instructors and has 15 students. Training is provided in life skills, human relations, career planning, academic upgrading, on-the-job training and traditional craft production. Additional classes are planned for training in marketable skills such as carpentry and small engine repair.

Social Services

The Provincial Department of Social Services maintains an office in Sheshatshui. As implied earlier, its case load is considerable.

There are two group homes in Sheshatshui, both funded by the Department of Social Services and managed by a local Innu board of directors. The children's home provides a secure and supportive environment for young children (up to six years of age) from broken homes or problem stricken families. Placement is arranged by a staff social worker. The adolescent home provides similar support and discipline for teenagers who have run afoul of the Young Offenders Act. A staff of seven includes four home parents and three domestic workers. Total capacity of the two homes is fourteen.

Municipal Services

The community does not have a proper water and sewer system. Most of the private dwellings constructed in the past four years have their own wells and septic tanks installed. Families occupying the older houses obtain water from public wells (maintained by the Band Council) and handle their sewage through the "honey bucket" system. Feasibility, engineering and design studies for an integrated water and sewer system have been partially completed. In principal the funds required for the construction of such a system ought to be forthcoming through the Native Agreement.

3.6 Community Organizations and Services - Tote Road Study Area

3.6.1. Community Organizations

(i) Western Labrador

Because of the proximity of Labrador City and Wabush, many community organizations draw their memberships from both towns. Each town has its own youth groups such as Guides and Scouts. However, many community groups cannot be identified as part of one town or the other. In fact, they may provide a unifying link between the two towns. For the purpose of this section, therefore, community groups in the two towns will be considered together as Western Labrador.

Organizations are dealt with under the following headings:

- Economic Development
- Social Concerns
- Sports and Recreation
- Cultural Groups
- Service Clubs
- Unions and Political Organizations

Economic Development

Because Labrador City and Wabush are considered "threatened single industry towns", local organizations have formed in attempts to diversify the town's economies. The Chamber of Commerce has been in existence for over fifteen years. Other groups are a result of the recession syndrome. In 1984, the federal government designated the area under the Modified Industry Labor Adjustment Program (MILAP). The Town Councils and Steelworkers Unions of the two communities, together with the Chamber, formed a MILAP committee to promote long term economic development, and to assist unemployed workers. The Labrador West Tourism Association was formed to develop secondary industry based on the area's year round tourist potential. In recognition of the need for diversification of the economy, the provincial government replaced the community based organization, the Labrador West Economic Development Association (1979-84) with a regional office of the Department of Development and Tourism.

Businesses which provide services to members and the community include the Carol Wabush Co-operative, (grocery and furniture) and the Newfoundland and Labrador Credit Union Society.

Social Concerns

Wabush and Labrador City have not been immune from the social problems found in Northern mining towns across the country. High wages, shift work, isolation and limited opportunities for women have affected social life, some

positively, some negatively. As a close-knit community, the people in Western Labrador have joined forces to help each other and provide services for themselves.

For example co-operative efforts have provided some of the local nursery school services. The Labrador West Status of Women Council formed in 1977 and a Women's Centre in 1980. The Alcoholism and Drug Advisory Committee is concerned with the problem of alcoholism and drug abuse in the communities. Groups for alcoholics and their families include: Alcoholics Anonymous, Alanor, Alateen, and the Don Woods Alumni.

The Labrador West Ministerial Association is an active, co-operative effort of the clergy and pastoral workers of the local churches who discuss social concerns and plan ecumenical services. Few people needed economic help until the first major lay-off from the mines in 1981. At that time the Ministerial Association set up an independent Social Action Committee to deal with the human tragedies of unemployment and poverty. A local branch of the Coalition for Equality was formed in 1984. Late that same year, the Family Crisis Centre opened, to provide temporary housing for victims of domestic violence, evicted teens, and fire victims.

Sports and Recreation

"Labrador City - Fitness Capital of Canada" 1983 and 1985 illustrates the importance of fitness and sports to people in Western Labrador. A voluntary Recreation Commission advises the Town's Recreation Department on local recreation needs. Considered a detriment by some, Labrador's long winters are a definite asset for winter sporting enthusiasts. They have spawned an alpine ski club with over 850 members and a nordic ski club with 550 members. Labrador City will be hosting world cup International Nordic Ski Championships for the second time in 1985.

Excellent recreation facilities in both towns have encouraged the development of numerous sports organizations which offer a broad range of activities for children and adults. A few examples of these are the Northern Lights

Aquatic Swim Club, the Tamarack Golf Club, the Tanya Snow-Cart Club and special event organisations, eg, for winter carnivals and Canada Day.

Cultural Groups

Individuals have organized together to provide cultural opportunities that would be provided for them in larger centres. The oldest of the cultural organizations is the Carol Players Drama Group, who have won acclaim provincially and internationally over the last twenty years. The Labrador West Arts Council has promoted a variety of cultural activities and has lobbied for the local Arts and Culture Centre, presently under construction.

Music plays a part in community life, with annual music festivals, Christmas Carol Services, and a community Glee club. This year the Labrador West Folk Festival Committee will be holding its 2nd annual festival. The Height of Land Branch of the Labrador Heritage Society is in the process of establishing a museum.

The significant Francophone population in Western Labrador has played an important role in business and cultural affairs since the Towns began. The Francophone Association operates a Centre to preserve the culture of its members. Canadian Parents for French has successfully lobbied for French immersion in local schools. Le Circle des Fermieres conducts crafts meetings and classes in French.

Service Clubs

There are active Allied Youth posts in the local schools. Sponsored by the provincial Alcohol and Drug Dependency commission, they encourage leadership development and community awareness and service.

Many national and international service clubs and lodges have local branches in Western Labrador, which financially support youth and community activities.

Unions and Political Organizations

The six locals of the United Steelworkers of America play an active role in both Labrador City and Wabush. The 2000 members in Labrador City and 600 members in Wabush work in the mines and in retail sales. Community services provided by the Steelworkers include scholarships, team sports, social functions, meeting space and donations to charities.

(ii) Churchill Falls

Considering the relatively small population (847) of Churchill Falls, the town's residents have a wide array of facilities, allowing them to establish various groups, clubs and organizations. At their disposal is an impressive list of recreational facilities, including a gymnasium, pool, youth centre, ice skating arena, and curling club, which host a wide variety of sporting activities.

Religious groups in the town include a Parish Council for those of the Roman Catholic faith, and a Central Church Board consisting of members of each denomination present in the community.

(iii) Labrador East - Happy Valley/Goose Bay

Economic Development

There have been several attempts by local groups to diversify the town's economy from its dependence on the air base and government services.

The Happy Valley/Goose Bay Development Corporation was formed in 1977 to promote new business and industry. In 1984 the Development Corporation set up Labrador Venture Capital to provide technical assistance and capital to new businesses throughout Labrador. The Development Corporation closed its office recently due to lack of funding, but is being operated at a reduced level by the Town and Chamber of Commerce.

The Terrington Consumers Co-operative once struggling, now flourishes to provide residents with a grocery store and gas bar service.

The Labrador Craft producers Association is a Labrador Group based in Happy Valley, which since 1975 has encouraged crafts as a cottage industry.

The Mokami Regional Development Association formed in 1983, includes representatives from the Lake Melville area. To ease the high level of unemployment and to provide local services, it has started innovative development projects, including a hydroponics greenhouse and ski-doo trails.

The Lake Melville Tourism Association has worked for several years to develop the tourist potential of the area. It has developed a campground in the area. It sponsors the annual Redberry Mukishan.

Social Concerns

Since the closure of the American base and the failures to sustain a woods industry, Happy Valley/Goose Bay has experienced high unemployment and resulting social problems. People in the Town have been quick to form organizations to deal with social concerns.

The Ministerial Association provides help to low income families, including a clothing bank. The Labrador Friendship Centre assists native people on housing, employment and social needs.

The Mokami Status of Women Council opened its Women's Centre in 1980, and more recently a Thrift Shop. The Libra House Committee is working to provide a Transition House for victims of domestic violence.

Residents have been very active in attempts to improve health services in the region, The Grenfell Regional Health Services Board directs the Grenfell administration on the operation of all its hospitals. An appointed Melville Hospital Advisory Committee makes recommendations on the operation of the hosp-

ital. There is an Advisory Committee on Alcohol and Drug Abuse and groups for Alcoholics including A.A., Alamon and Alateen. The Labrador Inuit Association Drug and Alcohol Program (LIADAP) is concerned with alcohol and drug problems of the Inuit people.

Sports and Recreation

In 1986, Happy Valley/Goose Bay will be, for the second time, hosting the provincially sponsored Labrador Winter Games, which will include all communities in Labrador.

Winter sports have a long season in Happy Valley/Goose Bay and downhill and nordic ski clubs have developed their own facilities. Other organizations offer a variety of sport activities.

Volunteer groups also organize special events including Winter Carnivals and the Labrador Canoe Regatta.

Cultural Groups

There are numerous cultural opportunities in Happy Valley/Goose Bay, most of which are provided by the efforts of volunteer community groups.

The Labrador Heritage Society operates a museum, sponsors an annual folk festival, and an annual dog team race.

The award winning drama group, Mokami Players, presents theatre several times a year. Drama is encouraged through the schools, with drama clubs and the annual creative Arts Festival, which also includes art and music.

Local artists have formed the Labrador Folk Arts Council. The annual Lake Melville Music Festival is organized by a local committee.

Service clubs

Young people themselves have organized the Labrador East Youth Advisory Committee, to organize and lobby for their concerns. An adult committee manages the Perrault Youth Centre, and a community group oversees the Gosling Lake Youth Camp.

Several service clubs are active in raising funds for local and national projects.

(iv) Sheshatshui

Recreational activities include dart leagues, men's and women's floor hockey leagues and bingo (broadcast over the community radio).

In years past a community recreation committee was operating but it is now largely inactive.

Political organisations include the Band Council and the Naskapi-Montagnais Innu Association. The latter has a board of eight directors; four each from Sheshatshui and Davis Inlet.

Other social and service organizations include:

1. The Sheshatshui Radio Society, which operates a community radio broadcast service in the Innu language, and is run by volunteers and is largely self-supporting.

2. The Northern Innu Health Council, recently established, funded by the Department of National Health and Welfare, which runs a program to provide wood, water, and other services to the community's elderly.

3. The Innu Alcohol Program, affiliated with the National Native Alcohol and Drug Abuse Program, which offers educational and counselling services to those in the community with a drinking problem.

4. The Innu School Board, which serves in an advisory capacity to the Catholic School Board and their operation of the local school.

(v) North West River

Organizations active in the community include the Town Council, the North West River Development Committee (of the Mokami Regional Development Association), the Lions Club, the church Women's Group (inter-denominational), a Labrador Inuit Alcohol and Drug Addiction Prevention Youth group, and the North West River Recreation Committee. As well a volunteer fire brigade exists for the aid of both North West River and Sheshatshui.

(vi) Mud Lake

Mud lake has a Local Development Committee which is also a member of the Mokami Regional Development Association. Some of their immediate interests entail plans for the refurbishing of old lumber barges and a sawmill as tourist attractions.

3.6.2 Education

Educational facilities with in the Study Area include 18 day schools, which employ 449 teachers.

(i) Teacher Workshops

In both Labrador City and Happy Valley/Goose Bay, two annual three day workshops are held with the direct involvement and representation of the NTA. Last year, teachers from Churchill Falls attended the meeting in Labrador City. In addition to these annual conferences, school boards hold 8 to 10 "in-service sessions" . A small number of teachers also fly to Newfoundland for workshops throughout the school year. These latter meetings normally take place in October/November or in March/April each year.

(ii) Adult and Continuing Education

Facilities and programs run by the Department of Career Development and Advanced Studies include the District Vocational School in Happy Valley/Goose Bay, which has a current enrollment[24] of 205 students.

Programs offered at the Happy Valley/Goose Bay District Vocational School are designed to prepare people to enter employment and also, to provide upgrading and retraining for those already in the work force. Courses available to students include:

- Basic Skill Development
- Business Education
- Carpentry
- Construction Work
- Cooking (Commercial)
- Heavy Duty Equipment Repair
- Welding

(iii) Post-Secondary Education (M.U.N.)

For the Fall/Winter semester 1985, Memorial University is offering eight credit courses to the residents of Happy Valley/Goose Bay, and thirteen to those of Labrador City. These courses are taught by tele-conferencing, recorded instructional films, a combination of the two, and by classroom instruction.

Other than credit courses, Memorial offers a certificate program with courses such as business and criminology.

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[24] 1983 - 84 academic year.

The Labrador Institute of Northern Studies, located in Goose Bay, has the responsibility for initiating and co-ordinating projects and programs from the various faculties of Memorial. The Institute uses its facilities for seminars and conferences, specific laboratory research, radio communications with field parties and logistical assistance to MUN researchers. The Institute's Advisory Council makes recommendations on needed research, programs and projects, and advises on the ethical guidelines for research in Labrador.

3.6.3 Law Enforcement

The Lake Melville Area is policed by the RCMP from the Happy Valley/Goose Bay detachment, which contains 21 officers.

In Happy Valley/Goose Bay, the types of crimes committed vary more than in the other Lake Melville communities because of its much larger, more diverse population. The most common crimes in the town, as with most other towns, are alcohol-related. In 1984 and the first half of 1985, there were 305 charges laid pertaining to alcohol.

There were as well 135 thefts and 60 assaults. Of the 116 breaking and entering charges placed, 77 or 66.4% were committed by juvenile males, by far the most common crime for this group. Twenty arrests were made on illegal drug charges for either marijuana, hashish, or LSD possession or trafficking.

In addition, there were 3 kidnappings and 1 attempted murder.

For the community of Mud Lake, crime is literally non-existent. For all of 1984, and the 1st half of 1985, there was one person apprehended, for willful damage of private property. The close-knit social network and the small population of Mud Lake allow the absence of crime in the community to be a reality.

In North West River, the most common crime is breaking and entering, under which 30 charges were laid during 1984 and the first half of 1985. Twenty-two

(73%) of these were committed by adult males. Eight additional arrests were made in connection with thefts, and 4 for assault. Liquor related charges saw 14 intoxicated persons detained, and another 14 charged under the Liquor Act.

Sheshatshui contrasts dramatically with North West River in terms of crime. There were 107 charges placed pertaining to alcohol during 1984 and half of 1985, including 97 detentions of intoxicated persons, and 10 transgressions of the Liquor Act. In addition, there were 55 arrests made for assault, 40 breaking and entering and 8 for theft. The majority of the crimes which take place in the community are alcohol-related, especially those related to assaults and property damage.

The communities of Labrador City, Wabush, and Churchill Falls all fall under the jurisdiction of the Royal Newfoundland Constabulary. The headquarters in Labrador City has a total of 25 officers. In Churchill Falls, there are two officers. The only statistics available on crime for the area are for 1984 and on a regional basis only.

The majority of offences during 1984 in Labrador West and Churchill Falls were alcohol-related crimes. Thirty-one people were charged for breach of the Liquor Control Act, of which 25 were adult males. Seventeen individuals were arrested for impaired driving, and another 5 for refusal of the breathalyzer. Eighteen thefts were committed by adult males. In addition, there were 8 accounts of assault by adult males and 4 accounts of breaking and entering.

The total number of traffic accidents reported to the Labrador West detachment in 1984 was 143, with only one fatality. The vast majority of the accidents (90.9%) resulted in no personal injury to the drivers and passengers.

As is evidenced by the above, police have few problems with serious crime. Most offences are misdemeanors such as public drunkenness, minor thefts, etc. Perhaps the most significant factors contributing to the low crime rates are the small populations of the communities, and the remoteness of the region.

3.6.4 Social Services

Section 3.6.1 includes an account of the various organizations within the Study Area which address social concerns. This section looks primarily at the activities of the Department of Social Services.

In Happy Valley/Goose Bay, there is both a regional and district office of the Department. On staff at the regional office are a regional director, regional services coordinator, three social workers, and an analyst. The district office employs a manager, four social workers, a child management specialist, and a homemaker.

The Department maintains a district office in Sheshatshui, which also serves North West River. The office is staffed by a district manager, two social workers, two social worker assistants and a homemaker. In addition to the standard programs offered by the Department, the district office provides other special services especially geared toward helping native peoples.

There are two group homes in Sheshatshui, both funded by the Department and managed by a local Innu board of directors. The children's home provides a secure and supportive environment for young children (up to six years of age) from broken homes or problem stricken families. Placement is arranged by a staff social worker. The adolescent home provides similar support and discipline for teenagers who have run afoul of the Young Offenders Act. Placement here is determined by the court. A total staff of seven includes four home parents and three domestic workers.

3.7 Transportation Network

People and goods are carried into the Study Area by a combination of modes. In Labrador City and Wabush, it is by railway and air. In Churchill Falls it is by a railroad/air combination. The Lake Melville area is served by marine and air transport.

It is the purpose of this section to describe the transportation system in the three areas.

3.7.1. Western Labrador and Churchill Falls

(i) Railway Service - Freight

Surface transport into the area is solely dependent upon the Quebec North Shore and Labrador Railway.

The railway carries mainly iron ore to Sept Isles and Point Noire, Quebec, It is totally automated and runs 200 car trains on a continuous basis.

Inbound traffic carries all forms of freight, including equipment and supplies, petroleum products and general consumer goods. These goods are delivered to the railway terminal at Sept Isles from two major destinations; Montreal (by truck or ship) and St. John's (by ship, mainly beer, soft drinks and spirits). Freight is delivered to Wabush/Labrador City north to the Esker siding (for delivery to Churchill Falls) and to Schefferville.

A large percentage of the goods carried, including iron ore, mining supplies and fuel is suited to the rail mode of traffic and therefore would probably continue to be transported by the QNS & L Railway. This was confirmed by members of both mining companies during interviews conducted by the Study Team. However, companies from outside the area under contract to the mining companies could use the Baie Comeau and possibly the tote road to provide faster service. Currently, they are dependent upon the railway scheduling and space availability.

Goods such as general consumer goods and perishables, however, would be transported by truck if a highway mode to/from were available to the area.

A breakdown of the volumes of freight currently moved by the railway into the area is unavailable. The total volume of freight estimated by Noah & Associates (1974) was:- tractor trailer traffic - 6,000 bus/year; boxcar traffic - 62,000 bus/year and 210 flatcars with vehicles and equipment.

Since that time, the combined population of Labrador City, Wabush and Churchill Falls has fallen by 2,950 persons, or approximately 16.5%. The two mines are operating at reduced capacity. The level of freight brought into the area by the QNS & L is therefore expected to be considerably lower than in 1974.

The total tonnage of local freight shipped from Labrador City to Sept Isles in 1984 was 16,768.578 metric tonnes.

The cost of freighting consumer goods from Sept Isles via the QNS & L Railway to Labrador City ranges from $19.14/tonne for vegetables to $27.97/tonne for furniture and general foodstuffs to $37.40/tonne for fresh fruit.

The proportion of total costs attributable to transportation could not be clearly calculated by the businessmen interviewed. For example, goods are often bought as package deals, transportation costs included.

Trucking costs can be affected by several factors, including the type of goods involved, whether freight is being carried on the back haul, competition between firms, terminal and depot locations, etc.

For trucking perishables by piggy back mode from Montreal to Sept Isles, for example, it is estimated, that costs average $70 - $80 per ton (555 miles round trip). Average costs for transporting container freight to Sept Isles by ship from Montreal run at $55 - $65 a ton, including landing/cartage in Montreal and transfer to the railway in Sept Isles. Average shipping costs remain much

lower than trucking costs. Therefore, for certain types of cargo, it is assumed that this will remain the preferred mode of transportation. Average cost per ton of shipping general cargo and beer/soft drinks from St. John's to Sept Isles is $65 - $70.

(ii) Railway Passenger Service

Passenger service to Sept Isles is provided bi-weekly by the QNS & L. Service to Esker and Schefferville has been on a once a week basis since 1983. Data on the number of people carried on an annual basis is not available. Use of the service typically swells in June, July and August, when people travel with their vehicles to Newfoundland and various other points on vacation. The majority of people travel to Sept Isles, however, some travel to the Esker siding by train and drive east on the Esker Road and the "Freedom" Road. Current travel patterns and preferences will be addressed further in the section dealing with impacts of the road.

Many problems have been expressed in recent years with the railway service to the area. They include:

- not being able to make a passenger reservation or to buy a ticket in advance,
- having to pay in cash first before leaving the station,
- not being able to check your car in at the same time as yourself,
- typically having to overnight in Sept Isles, while you wait for your car to arrive, or, for inbound passengers, to wait for considerable periods of time before your car arrives,
- for the Esker run, having to send your car ahead of you, or wait for it at the other end.

A large number of people in Labrador West indicated during interviews that they would use the tote road to travel out of the area. This is not difficult to understand when one considers the alternatives currently available.

A typical family of four wishing to travel to Newfoundland for summer vacation now have to spend a lot of time and expense getting to either Sept Isles or Esker, before they can begin driving.

For the Sept Isles route, the time expenditure is typically as follows:

Day One	-	To Sept Isles by train, overnight in Sept Isles
Day Two	-	Drive to Baie Comeau and take the ferry across to Matane
Day Three	-	Reach North Sydney
Day Four	-	Ferry crossing
Day Five	-	Reach Newfoundland destination.

For the Esker Route, the schedule is as follows, subject to making the proper ferry connection at Goose Bay:

Day One	-	Train to Esker, overnight possibly in Lobstick or Churchill Falls
Day Two	-	Drive to Goose Bay
Day Three	-	Ferry to Lewisporte
Day Four	-	Reach Newfoundland Destination.

The comparative costs are as follows, assuming a family of four with a car and trailer[25]. Food and accommodation charges are not included:

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[25]Gas and operating expenses were assembled as follows:
Gas consumption was estimated at 10 litres/100km for a medium sized car plus trailor, as per the Federal Government's Fuel Consumption Guide, except for the Esker and Churchill River Roads, where the estimate was 15 litres/100km. The average cost per litre was set at $0.67.5. Operating expenses were set at $6.99/100 km for Quebec and the Maritimes (Canadian Automobile Association's national statistic). This was factored up by 7% for Newfoundland and by 100% for the Esker and Churchill River Roads.

Sept Isles Route:

Train to Sept Isles	$250.00
Ferry from Baie Comeau to Matane	$ 80.00
Drive from Sept Isles to Baie Comeau and Matane to North Sydney 1546 km at $13.74/100km	$212.42
Ferry across the Gulf	
- to Port aux Basques	$185.00 (ave.)
- to Argentia	$300.00
Drive to St. John's	
- from Port aux Basques 909 km at $14.23/100km	$129.35
- from Argentia 131 km at $14.23/100km	$ 18.64

The estimated cost of making the one way trip, for railway, ferry and gas charges, is therefore in the vicinity of $860.00 for both the Port aux Basques and Argentia routes.

Esker - Goose Bay Route:

Train to Esker	$400.00[26]
Drive to Happy Valley/ Goose Bay 482 km at $24.08/100km.	$116.00
Ferry to Lewisporte	$275.00
Drive to St. John's 392 km at $14.23/100km	$ 55.78

The total estimated one-way cost is therefore $846.78.

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[26]QNS & L charges are comparatively higher than for the Sept Isles run as cars not normally on the service have to be added to accommodate vehicles.

While the vehicles and passenger expenses are roughly the same for the two routes, the extra day spent on the Sept Isles - Maritimes route, would mean extra food and accommodation expenses than going through Goose Bay. A final point is that the poor quality of the Churchill River Road translates into additional expense due to wear and tear on vehicles and gas consumption.

(iii) Road Service

Apart from the road to Ross Bay Junction, the main road servicing the area leads to Fermont, Quebec and south to the Town of Gagnon. This road is made up of three components:-

- Labrador City to the Mount Wright mine, (30 kilometers ± south of Fermont), which is paved,
- Mount Wright to Fire Lake (60 kilometers ±), which is a low quality gravel road, of similar quality to the Churchill River Road, and
- Fire Lake to Gagnon, which is a good quality, paved road (60-70 kilometers).

There is no road south of Gagnon for a distance of 25-30 kilometers. A tender has recently been let for construction of this leg over the next two construction seasons under a Federal Provincial Agreement on Natural Resource Development.[27] There is a road over the remaining distance to the Quebec North Shore. The road south to the Manic 5 dam is gravel, constructed for a speed of 70-80 kilometers/hour or roughly to the Ross Bay Junction Road standard. The Mannic 5 dam to Baie Comeau stretch is paved.

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[27]Interview with M. Champoux, Transports Quebec, 20 September 1985.

The work remaining, therefore, to achieve a good quality road link between Labrador West and Baie Comeau is construction of the stretch south of Gagnon and major upgrading of the Mount Wright - Fire Lake Section. As noted above, the former is scheduled to be completed in two years. There are currently no plans in place to upgrade the Mount Wright to Fire Lake Section. The current plans of Transports Quebec are for the Fermont to Baie Comeau road to be maintained year round; however, this will depend on the availability of funds.

Another road in the extended region leads south from Schefferville, Quebec for approximately 60 kilometers into Labrador, terminating at the hydro--electric dam on the Menihek River. It is maintained in the summertime as it provides access to the dam and a fish camp. Heading south from the dam along the rail line there are a series of trails which were used when the railway was being built. To link into the Esker Road at Esker would require a large bridge across Menihek River and 60-70 kilometers of new road. The road would be located on Newfoundland soil and there are currently no plans by Newfoundland Government to provide this link for the people of Schefferville.

(iv) Churchill Falls - Surface Transportation

CFL Co. purchases approximately 1500 tons of goods a year from the Montreal area, which is shipped via the Quebec North Shore and Labrador Railway. Shipments arrive at the Esker siding in 45 foot, 15 ton capacity highway trailers, from where it is trucked to Churchill Falls. This includes a weekly food shipment in addition to other materials and equipment required by the company.

The total cost of transporting a 15 ton load from Montreal to Churchill Falls and return is approximately $3,000 or an average of $200/ton.

CFL Co. maintains the Esker Road to the Esker siding on a year round basis. In addition to using the road for freight transport, the company also does

maintenance checks on their Lobstick and Gabbro control structures. For some purposes, they use a helicopter in winter for maintenance.

A limited amount of goods, mainly construction materials and household effects, has been trucked to Churchill Falls from Goose Bay. However, this will remain only a trickle until the Churchill Falls Road is upgraded; particularly the Pope's Hill to Mile 60 stretch.

(v) Air Service - Labrador West and Churchill Falls

The area is served by a Transport Canada operated airport at Wabush and one operated by CFL Co. at Churchill Falls.

With the absence of a road link and being an area with a relatively high standard of living, it is understandable that there is a high dependence on air travel.

The total number of enplaned and deplaned passengers and cargo handled at the two airports between 1980 and 1983, are shown in Tables 3.20 and 3.21.

Table 3.20 Air Passengers, Enplaned and Deplaned, Labrador Scheduled and Chartered Service, 1980 - 1983[28]

	1980	1981	1982	1983
Wabush	97,336	93,201	89,628	74,263
Churchill Falls	8,100	6,839	5,719	3,573

[28]Service - Transport Canada, Air.

Table 3.21 Air Cargo, Labrador Scheduled and Chartered Service, 1980 - 1983 (Metric Tons)[29]

		1980	1981	1982	1983
Wabush (Mail)		626	596	600	495
(Cargo)		817	796	605	528
Churchill Falls	(Mail)	80	67	66	49
	(Cargo)	116	105	90	19

Scheduled service is provided to Wabush Airport by CP Air and Quebec Air. In addition, Air Schefferville runs a King Air shuttle service to Schefferville. Churchill Falls is served by CP Air. Labrador Airways does not serve the Study Area as such but provides service between HVGB, the coastal Labrador communities and the island portion of Newfoundland. General cargo freight charges from St. John's and Halifax are provided in Table 3.22.

Table 3.22 CP Air Freight Charges to Wabush and Churchill Falls[30]

	Wabush	Churchill Falls
/Kilo	$1.80	$1.63
/Kilo (over 45 K)	1.73	1.56
Min. Charge	18.00	18.00

Businessmen in Labrador West purchase goods flown in from Quebec (via Quebec Air) and from Newfoundland and Nova Scotia (via CP Air). Data on cargo carried by CP Air is unavailable. However, a large percentage of the cargo at Wabush Airport appears to be handled by Quebec Air. In 1984, for example, the airline

[29]Source - Transport Canada, Air.

[30]Source - CP Air.

handled approximately 318 tons of general cargo (both in and out) at the airport.

3.7.2 Eastern Labrador

(i) Water Transport

The major transportation link to Eastern Labrador is by sea. CN Marine is the principal carrier. Others include the Hudson's Bay Company which sends one or two ships per season from Montreal, and other private vessels carrying cargo such as petroleum products.

CN Marine serves the Lake Melville area out of St. John's and Lewisporte. A portion of the North Coast service originates in Happy Valley/Goose Bay, the remainder coming from Newfoundland.

The fleet currently in operation consists of:

- the Taverner and Bonavista, which operate a coastal passenger and freight service out of Lewisporte on a 16 day cycle to Nain,
- The Sir Robert Bond, which operates in a passenger mode (tourist season) and a freight mode (late Fall) from Lewisporte to Happy Valley/Goose Bay, with a stop in Cartwright,
- The Marine Packer, based in Happy Valley/Goose Bay, which provides freight service to the north coast.
- the Kloster, which serves the south Labrador coast (mainly) from Lewisporte.
- The Marine Transport, which provides a freight service from Lewisporte to the North Coast, mainly.

- The Topsail Star and Marine Eagle, which provide general freight service to Labrador.

- The Astron, which provides a container freight service between St. John's and Happy Valley/Goose Bay.

CN Marine's five year plan calls for replacement of this fleet with faster and fewer ships, except for the Bond and the Astron. The Bonavista is to be replaced next year. The following year, five vessels are to be replaced by three.

Plans call for more container service such as is being provided by the Astron, with an emphasis on small containers, starting in 1987. This will mean less damage, greater security and higher efficiency.

Approximately equal volumes of freight are sent to Labrador through St. John's and Lewisporte, as shown in Table 3.23.

Table 3.23 CN Freight Movement from Newfoundland to Labrador, (All Ports), 1982 - 1984[31]

	1982	1983	1984
Total Freight	43,632	46,718	51,914
From St. John's	13,724	14,549	16,640
From Lewisporte	16,175	16,298	16,836

As a generalization, most of the freight coming from St. John's is containerized, ie, on the Astron. It would include beer, general merchandise and building supplies. Service from Lewisporte tends to supply general merchandise and passengers to the Coast, with the major exception of the Bond.

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[31]Transport Canada, Water Transport Division.

Table 3.24 provides detail on the volumes of freight CN Marine carried between Happy Valley/Goose Bay and Newfoundland from 1979 - 1983.

The average cost of transporting goods by CN Marine is $21.00/metric ton from Lewisporte and $32.00/ton from St. John's. Wholesaler charges in Newfoundland and Happy Valley/Goose Bay and wharfage fees would result in an average cost of $45/ton from Lewisporte and $54/ton from St. John's.

Table 3.24 Freight (Tons) Carried by CN Marine Between Lake Melville Area and Newfoundland - 1979 - 1983[32]

	To: Goose Bay, Ex:		
Year	St. John's	Lewisporte	All Ports
1983	11,418	9,746	22,419
1982	9,804	9,680	20,191
1981	-	-	23,316
1980	-	-	19,489
1979	-	-	17,219

	Ex: Goose Bay, To:		
Year	St. John's	Lewisporte	All Ports
1983	4,574	3,339	10,242
1982	3,470	2,717	8,420
1981	-	-	10,145
1980	-	-	7,571
1979	-	-	7,044

The passengers carried by all CN Marine vessels between Lewisporte and Happy Valley/Goose Bay is summarized in Table 3.25.

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[32]Source - CN Marine.

Table 3.25 Passengers Carried by CN Marine Between Happy Valley/Goose Bay and Lewisporte - 1980 - 1984[33]

	Lewisporte to Happy Valley/ Goose Bay	Happy Valley/Goose Bay to Lewisporte
1984	3,379	3,481
1983	3,594	3,649
1982	3,120	3,202
1981	3,029	3,050
1980	2,252	3,316

Most of this service is provided by the Sir Robert Bond.

The number of vehicles carried by the Bond during its passenger mode is outlined in Table 3.26.

Table 3.26 Vehicles Carried by MV Sir Robert Bond[34] During Passenger Mode (June - September 15), 1982 - 1984 (in and out).

1984	1,973
1983	2,146
1982	2,060

The cost for a family of four with a car and trailer to take the Sir Robert Bond one way to Lewisporte is approximately $280.00.

The CN marine operation is about 95% subsidized, with an approximate annual cost of $25,000.000[35]. This level of subsidy has been in effect since the beginning of the service and there are no plans to alter it. The subsidy per ton of goods carried is approximately $115 - $130.

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[33]CN Marine.

[34]CN Marine

[35]Interview with Manager, CN Coastal Services.

(ii) Air Service

Table 3.27 gives a picture of the volumes of passengers and freight which passed through the Happy Valley/Goose Bay Airport between 1980 and 1983.

Table 3.27 Passengers (Enplaned and Deplaned) and Cargo (metric Tons), Happy Valley/Goose Bay Airport, 1980 - 1983[36]

	1980	1981	1982	1983
Passengers	56,701	54,596	49,134	45,739
Mail	931	909	837	663
Cargo	1,777	1,658	1,592	828

CP Air provides a freight service into Happy Valley/Goose Bay from St. John's and Halifax. During the winter months, particularly, a high percentage of the perishables flown in originate in Halifax.

The cost of flying goods into the area is prohibitive. One major store owner estimated for example, that his company spends $80,000/year for freight charges on produce.[37]

Eastern Provincial Airways air freight rates into Happy Valley/Goose Bay from St. John's and Halifax are $1.39/kilo ($1,390/ton) for general cargo and $2.50/kilo ($2,500/ton) for air express.

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[36]Source - Transport Canada, Air

[37]Personal Interview.

3.7.3 Results of Resident and Businessman's Survey, Tote Road EIS

Businessmen were asked during the Study about current problems experienced in transporting goods into their area. The results are shown in Table 3.28. Of particular interest is:

- The percentage of respondents reporting damage to goods in Labrador East (95%).

- The percentage reporting loss of goods (39% in Labrador West; 55% in Labrador East).

- The % of businesses in Labrador East having problems with freshness (30%) or outdated goods (45%).

- The % of businesses reporting delays in receiving goods (75% in Labrador West; 95% in Labrador East).

- The high % of businesses in both East (45%) and West (46%) having problems with the availability of items.

Table 3.28 Problems Experienced in Transporting Goods

	Lab. West		Lab. East		Total	Sample
Damage to goods:						
Never	12	43%	1	5%	13	27%
Sometimes	12	43%	13	65%	25	52%
Often	2	7%	6	30%	8	17%
N/A	2	7%	0	0%	2	4%
TOTAL	28		20		48	

	Lab. West		Lab. East		Total	Sample
Loss of goods:						
Never	15	54%	9	45%	24	50%
Sometimes	9	32%	9	45%	18	38%
Often	2	7%	2	10%	4	8%
N/A	2	7%	0	0%	2	4%
TOTAL	28		20		48	

	Lab. West		Lab. East		Total	Sample
Freshness:						
Never	0	0%	4	20%	4	8%
Sometimes	2	7%	4	20%	6	13%
Often	2	7%	2	10%	4	8%
N/A	24	86%	10	50%	34	71%
TOTAL	28		20		48	

	Lab. West		Lab. East		Total	Sample
Outdated goods:						
Never	6	21%	3	15%	9	19%
Sometimes	2	7%	7	35%	9	19%
Often	1	4%	2	10%	3	6%
N/A	19	68%	8	40%	27	56%
TOTAL	28		20		48	

	Lab. West		Lab. East		Total	Sample
Delays in receiving goods:						
Never	6	21%	1	5%	7	15%
Sometimes	10	36%	5	25%	15	31%
Often	11	39%	14	70%	25	52%
N/A	1	4%	0	0%	1	2%
TOTAL	28		20		48	

	Lab. West		Lab. East		Total	Sample
Unavailability of Items:						
Never	12	43%	8	40%	20	42%
Sometimes	13	46%	9	45%	22	46%
Often	3	11%	3	15%	6	12%
N/A	0	0%	0	0%	0	0%
TOTAL	28		20		48	

Current Travel Patterns

Table 3.29 indicates the number of trips taken, by respondents to the resident survey, during the last year. As can be seen the most common travel pattern throughout is one trip per year (36% of respondents).

It is evident from Table 3.29 that almost all residents surveyed leave Labrador at least once a year. In fact the average number of trips is about two per person per annum. (Total trips reported 207; Total Sample 104). Only 18 people or 16 percent of the total reported not having left the community in the course of the last year.

Table 3.29 Current Travel Patterns

Number of Trips	Lab. West		C. Falls		Lab. East		Total Area	
0	6	15%	4	20%	8	19%	18	17%
1	21	51%	2	10%	13	30%	36	35%
2	8	20%	6	30%	10	23%	24	23%
3	1	2%	3	15%	6	14%	10	10%
4	4	10%	3	15%	3	7%	10	10%
5 - 10	0	0%	1	5%	2	5%	3	3%
10 +	1	2%	0	0%	1	2%	2	2%
TOTAL	41	100%	19	100%	43	100%	103	100%

It is interesting that the highest percentage of people who reported having taken no trips out of the community come from Churchill Falls, the most isolated of the three areas. CFL Co. gives generous travel subsidies to its employees but perhaps some of them prefer to use the cash for reasons other than personal travel.

The most common method of travel is by air (See Table 3.30) and the destination is usually Newfoundland (Table 3.31). Travel within Labrador is limited; only 21 or 10 percent of trips were of this nature. Almost one third of all trips were to other locations or mainland Canada. An interesting point to note from Table 3.30 is how little use Labrador East residents make of CN Marine.

Table 3.30 Main Modes of Transportation Used by Residents

Method of Travel	Lab. West	C. Falls	Lab. East	Total
Air	56	38	89	183
CN Marine	0	0	6	6
QNSLR	7	0	0	7
Car	2	9	0	11
TOTAL	65	47	95	207

Table 3.31 Total Number of Trips by Destination for Study Area

Location	Lab. West	C. Falls	Lab. East	Total Sample
Destination				
Labrador	0	11	10	21
Newfoundland	37	27	34	98
Canada	19	2	48	69
Elsewhere	9	7	3	19
TOTAL	65	47	95	207

In Table 3.30, two features stand out. One of these is the dominance of air travel over any other form of transportation and the second is the surprisingly low percentage of residents who stated they travelled by CN Marine or the QNSLR. Some factors which may explain this are:

1) The length of travel time required by these modes, which would represent a considerable loss of time on a standard two week summer vacation.

2) The high rates of pay and travel subsidies granted by IOCC, Wabush Mines and CFL Co. to their employees mean that for most, the high cost of air travel is not prohibitive.

Churchill Falls residents report the highest number of trips taken within Labrador. This again is surprising given the travel subsidy policy in force in the community.

Table 3.32 shows that approximately half the trips within the Study Area were for vacation purposes and a large number (42%) were for business. No trips were taken primarily to shop. Only a small number (7%) of total trips had as their main reason visiting friends and family. However, it is highly

probable that a large number of those going on vacation to Newfoundland were also going to stay with family members.

Table 3.32 Main Reasons for Travel in Study Area

Reason for Travel	Lab. West	C. Falls	Lab. East	Total
Business	24	27	36	87
Visit Family	9	3	2	14
Vacation	33	19	54	106
Shop	-	-	-	-

3.8 Land Use and Controls

Current land use within the Study Area is shown on the Major Land Uses map (Figure 2) accompanying this report.

Land within the Ross Bay Junction - Esker - Churchill Falls triangle is almost exclusively held by the Crown, with portions leased to private concerns. The major "formal" land users are:-

- CFL Co.,
- QNS & L Railway,
- Cabin owners along the Esker Road and Ashewanipi River, in the vicinity of Ross Bay Junction,
- a tourist operator and members of the Innu Community at Lobstick and Lobstick Dam (fish plant).

CFL Co. holds 35 - 40 leases in the area, the largest of which is for approximately 51,799 hectares at the power site. There are leases surrounding the dykes and control structures and associated roads, the principal ones, (aside from the main power site), being at Gabbro, Lobstick and Ossakmanuan. Other leases include one at Esker, the Twin Falls Road and the airstrip.

There are three power transmission lines leading out of Churchill Falls:-

- Two 230 kv lines, which go to Labrador City/Wabush via the Twin Falls Power Plant on a 73.1 metre (240 foot) right of way.

- Three 735 kv lines, which go to Hydro Quebec on a 213.3 metres (700 foot) right of way.

- One 138 kv line, which goes east to the Lake Melville area on a 30.4 metre (100 foot) right of way.

Leases for all the above land are on a 99 year renewable basis.

A 30.4 metre (100 foot) strip of land for the Esker Road right of way was transferred by license to Esker in 1957 with the right to develop and maintain the road for the (99 year) term of the water lease. The license was subsequently transferred to CFL Co. in 1985. The option was presented by the Newfoundland Government of changing the license to a fee simple grant, however, there is no record of this having been done.[38]

All of the land leased by CFL Co. is under mortgage, having been used as security for loans. If portions of this land were proposed for public use, the company's bondholders would have to be satisfied that CFL Co.'s rights to operate and develop would not be affected.

Cabin owners within the Study Area hold five year lease permits at a cost of $75.00/year. There are also a few trappers' tilts along the Esker Road, who pay $5.00/year.

The lodge at Lobstick is located on a 1.1 hectare parcel, which is being held under a 50 year lease.

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[38]Interview with M. Green, CFL Co., 10 October, 1985.

Schefferville
TERRITOIRE
DE
NOUVEAU QUEBEC
LABRADOR
WEST
QNS & L
Railway
Labrador
City
Wabush
DULEY LAKE
Fermont
SAGUENAY
TO
GAGNON

ROSS BAY JUNCTION–CHURCHILL FALLS

TOTE ROAD

ENVIRONMENTAL IMPACT ASSESSMENT

Major Land Uses

- communities
- existing road links
- transmission corridors
- hydro-electric power plant
- major CFLCo control structures
- major cabin areas
- fish camps

Figure 2

SCALE 1:350,000

0 5 10 20 30 40 50 KM

DATE: Nov. 1985

CONSULTANT: [redacted]

The Innu have used the Study Area for centuries for hunting and trapping. This is dealt with extensively in the Native Resource Use Study. There is an Innu community at Lobstick but it is not a permanent one. There is also a fish plant and related structures near Lobstick dam. Camps are also set up on a regular basis along the QNS & L Rail line, eg., at Esker and Oraway and Pitaga, south of Ross Bay Junction.

Other land uses in the extended area include two fish camps in the Lac Joseph - Atikonak Lake area and a cabin development at Ross Bay Junction.

CHAPTER 4: FUTURE CONDITIONS

4.1 Without the Tote Road

4.1.1 Introduction

The information presented in the preceding section has outlined current social and economic characteristics pertaining to the Study Area, some of which may be impacted by the proposed tote road. This section attempts to describe the most likely changes in this baseline profile which may occur over the next 5 to 10 years without the development of the tote road. Current estimates suggest that 'change' in the area is expected to be slow and that many aspects of the socio-economic life of the region are expected to remain much as they are today.

4.1.2 Demographic Characteristics

As shown in Section 3.2.1, past large scale growth in population in the Study Area has been caused by major in-migration of labor to work in the mining or construction industry or at the USAF base at Happy Valley/Goose Bay. This has caused rapid growth of the affected communities in certain periods and subsequent decreases in population (out-migration) in others.

The communities of Labrador City, Wabush, Churchill Falls and Happy Valley/Goose Bay have shown a decline in population since the mid to late 70's. Information from IOCC and Wabush Mines indicates that employment in the mining industry is expected to stabilize at near current levels. Even with an upswing in the world market for iron ore, employment is not expected to return to past levels. This is in part due to increased automation being undertaken in order to remain competitive.

Activity in Churchill Falls is now concentrated around the operation and maintenance of the power plant. Population levels have declined very slowly since construction of the facility was completed in 1976. The population level is now stabilized and no new in-migration is expected, assuming no new hydro-

electric power developments over the next 5 - 10 years.

In the Happy Valley/Goose Bay area, population decline followed the pull-out of the USAF from the town in the mid 70's. However, over the past 5 years or so there has been a slow but steady increase in population, which can be expected to continue over the foreseeable future. The growth of Happy Valley/-Goose Bay as a regional service centre, the location of many government offices in the community and the recently announced plans to spend $92 million upgrading the airport and related facilities will all contribute to this sustained growth. Recent plans announced by the Department of National Defence to establish a NATO Tactical Fighter Weapons Centre in HVGB would see $500-600 million being spent for development, with an influx of up to 1700 personnel and their families. It is expected that growth in North West River and Mud Lake would closely parallel that in Happy Valley/Goose Bay.

The community of Sheshatshui has shown a different pattern of growth to others in the Study Area in that there has been no out-migration from the community, birth rates are high and over 40% of the population is under 14 years old. Given these factors, the population of the village will increase rapidly in the years ahead.

4.1.3 Economic Activity

Information received from resource development agencies, government departments and private business, gives little reason to believe that the pattern and general level of economic activity in the Study Area would be significantly different without the tote road from that which exists today. The exception to this will be population growth in Happy Valley Goose Bay which will result from planned military activities by the Department of National Defence.

(i) Mining

The outlook for iron ore mining in Labrador West is the continuation of current operating levels for the next few years. Providing IOCC and Wabush

Mines can remain competitive, the operation should remain viable into the long term. Ensuring competitiveness in world markets will probably result in some additional automation in the industry, which could result in marginally fewer jobs than exist today.

A possible spin-off industry from Wabush Mines, which has aroused interest in the region recently, is a Manganese Leaching Plant which would extract manganese from iron ore. However, before this process could be possible there would have to be an additional plant built in Wabush to achieve additional processing of the iron ore. The extra milling/leaching process could be expected to generate an additional 25 - 30 jobs in the area. However, it is likely that Pointe Noir, Quebec would be the preferred site for the company as it already has a plant there which can prepare the iron ore for the leaching process.

Apart from iron ore, there is potential for development of the Kitts Michelin uranium deposits and the rare earth minerals at Strange Lake in the Border Beacon area. Neither of these deposits are within the immediate Study Area, although there is a slight chance that product from the Strange Lake deposit (should development occur) would be transported to Schefferville and south through the Study Area[39]. This is not expected to use the tote road.

(ii) Hydro-Electric Development

The Lower Churchill Development Corporation has recommended initial construction of Muskrat Falls, with a capacity of 618 mega watts, followed by Gull Island with a capacity of 1,698 mega watts. However, development is dependent on financing and markets and it is difficult to predict with any degree of certainty when or if these developments will be realized. The Lower Churchill represents a hugh hydro electric power potential which will come on stream sometime in the future when demand exists and secure financial backing can be found. The existence of a tote road between Labrador West and Churchill Falls is not expected to affect decisions on the feasibility of the projects.

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[39]interview with Public Information Manager, IOCC

(iii) Michekemau Fisheries

Several attempts have been made during the last 5 - 7 years to develop a whitefish harvesting industry on the Smallwood Reservoir. Whitefish is a good substitute for a fish used in a traditional Chinese dish, which is coming into short supply.

Michekemau Fisheries Ltd. has produced dried whitefish products and recipes and marketed them in Chinese communities in Canada and Hong Kong. Construction of the fish plant and related facilities was completed in 1983.

The product was to be dried or salted and exported in tractor trailers from Lobstick to Esker and then south on the QNS & L Railway.

The fishery is capable of producing 100 - 200,000 lbs. of processed fish (dried) annually at a market value of $2.00 - $2.50 per lb. Present facilities include the fish plant, a fish cleaning stage, a boat slide, a gosler, an ice house and a diesel generator. It would offer employment to 10 - 20 full time workers and jobs in the fish plant for wives and older children.

Requirements to operate the facility include the need for start up funding (no longer a LEAD Project) and a suitable management structure such as was in place during the development and marketing stages. There is also the question, raised earlier in this report, of mercury contamination in the reservoir. While it does not appear to be affecting the whitefish, lake trout contain mercury at unacceptable levels.

The project does not require the tote road to be developed in order to operate successfully, as long as the Esker Road is maintained at its current level and can be used to transport product to market.

(iv) The Innu

It is extremely difficult to predict with any degree of certainty what the future will hold for the Innu people of Sheshatshui with or without the tote road. However, the absence of large scale development in their traditional hunting area, through which the tote road passes, should make it easier for them as a group to settle their land claims and so maintain their attachment to the land; a factor which is seen as vital to their social and cultural integrity.

Despite being heavily dependent now on white man's ways, ie, social assistance, schooling, alcohol, aircraft, guns, etc, the Innu feel that it is on the caribou that they most depend for their social and economic well being. As is pointed out by wildlife biologists[40], the future existence of the Lac Joseph caribou herd is in considerable doubt and construction of the tote road will likely have additional negative impact upon it. There is a chance that this herd will regenerate itself if the road is not constructed, or if appropriate mitigative measures are put into place following construction.

However, as is pointed out in Section 3.5, only a relatively small number of Innu engage in the caribou hunt at present. It is not certain whether these numbers will increase in future or whether the younger Innu will maintain abandonment of the traditional way of life in favor of employment or government assistance. What is known is that the rate of crime and alcoholism and other related problems have been on the increase since the Innu took up semi-permanent residence in Sheshatshui. Whether these will increase or decrease in future depends on a number of factors, but it might be concluded that the Innu themselves feel that conditions will deteriorate less in the absence of road construction or other "white intrusions" into their traditional hunting areas.

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[40] See Wildlife Study Component of the Labrador Tote Road E.I.S.

(v) Other

Business

Business opportunities without the tote road will likely continue to be approximately similar to the current situation, in Labrador East. In Labrador West, completion of the road link to the Quebec North Shore will bring with it opportunities in the tourism field particularly. Local businessmen may also be able to capture more business from the mining companies as they would have freer access to goods and services in the province of Quebec. Provincial officials and mining company officials are meeting on the issue of greater spin-off benefits occurring locally.

Isolation & Propensity to Travel

If the tote road were not built, residents of Labrador West would most certainly have a reduced sense of isolation once the Baie Comeau Road is completed. This could be expected to spill over into Churchill Falls as well. The tendency of the people of Churchill Falls to travel to Labrador East more than Labrador West could be reversed, as they could drive to Esker, take the train to Labrador City and drive to the Quebec North Shore.

There would likely be no change to the feeling of isolation for Labrador East residents and, without upgrading of the Churchill River Road, one could not expect any significant increase in the number of people driving to and from Happy Valley/Goose Bay.

4.2 Future Conditions With The Tote Road

4.2.1. During Construction

(i) Introduction

Preliminary analysis of the project description for construction of the tote road suggests that only relatively minor impacts will be associated with this stage of the project. The main types of impacts fall into the following categories:

i) Impacts upon local business.
ii) Impacts on the labor force.
iii) Impacts related to the location of the work camps.
iv) Impacts upon wildlife and the potential of the area for hunting, fishing and tourism.

The significance of these impacts will depend on several factors:

i) Route selection, ie. whether the road follows the proposed or alternate route
ii) Labor hiring policies i.e. whether or not local hiring policies are enforced for contracting out the work.
iii) Type of work camps used, i.e. whether they are temporary or permanent structures.
iv) The degree of monitoring in place during the construction phase to ensure minimal disruption of wildlife habitat or degradation of the area's general attractiveness to tourists.

(ii) Impacts on Employment/Unemployment

Labor requirements for construction of the tote road are as follows:
Each road construction contract should employ approximately 30 persons, with

each bridge utilizing 10 persons. The construction labor can be summarized as follows:

Proposed Route	Alternate Route
1st year - 40 persons	40 persons
2nd year - 40 persons	40 persons
3rd year - 30 persons	40 persons
4th year - 30 persons	40 persons
5th year - 30 persons	30 persons
6th year - 40 persons	40 persons
7th year - 30 persons	30 persons

Multiplier Effects

Estimates of direct and indirect employment generated by construction activities in Newfoundland is 2.058, i.e. for every job generated in the construction sector an additional 1.058 jobs would be generated through successive rounds of spending (Statistics Canada, 1985).

It should be noted that this includes all construction activities; no distinction is made between residential and non-residential construction.

It should also be noted that these multiplier effects are for the Province as a whole. It does not follow that the additional jobs generated will be in the same region as the project. Not all workers may in fact be drawn from the local area and leakage effects from the region of successive rounds of spending may well be quite high.

Examination of baseline data shows high rates of unemployment, especially among unskilled laborers. Therefore, no shortage of manpower is anticipated for the project.

Discussions with construction companies and data derived from business questionnaires have shown that Labrador businesses are very interested in being awarded contracts to work on the project.

Impacts will depend upon which companies get the contracts and whether

labor is hired locally or not. Local hiring policies to enhance positive impacts are suggested but it is realized that union policies re hiring may prevent this. In particular, Innu should be well informed of available jobs for which they can apply.

(iii) Impacts on Business

The data displayed below show estimated total construction costs for the road by both the proposed and alternate routes.

Project Construction Costs

A) Preferred Route

Construction	-	$300,000/km x 130 km =	$39,000,000
Engineering	-	10%	3,900,000
			$42,900,000
Contingencies		10%	4,300,000
TOTAL			$47,200,000

B) Alternate Route

Construction	-	$350,000/km x 90km =	$31,500,000
Upgrading Road	-	$100,000/km x 100km =	10,000,000
			41,500,000
Engineering		10%	4,200,000
			$45,700,000
Contingencies		10%	4,600,000
TOTAL			$50,300,000

Multiplier Effect

Labor income multipliers indicate the total direct and indirect labor income generated in the Province per dollar of direct income. For the construction industry as a whole, this is estimated to be 1.897, i.e. for every dollar of direct income, an additional $0.90 of income is generated through the

multiplier effect (Statistics Canada, 1985).

It has been estimated (ADI Ltd., 1984) that $9.4 million will be spent in wages during the construction project. Using the 1.9 multiplier noted above, this could mean a total income effect of $17.86 million generated in the province. However, it is unlikely that this will be achieved in the Study Area itself due to the potential for leakage noted earlier. In addition, union control over hiring practices may mean that labor is not recruited locally. The Laborers International Union, which governs workers in the construction industry, maintains a policy of equal opportunity for all union members throughout the province. Local area union members would be hired first on such a project. Union members living elsewhere in the province would be given preference in hiring practices over other local nonunion labor. Detailed analysis would have to be undertaken before an estimate of how much revenue within the $9.5 - $17.86 million range will be captured by the local economy.

(iv) Work Camp and Other Environmental Impacts

According to data supplied by the Department of Transportation, the work-camps to be used during road construction are small and of a temporary nature. There will therefore be no lasting visual impacts due to the work camp buildings themselves. In addition, there will be no structures remaining in the area upon completion of the road. Proposed locations would position only one of the camps in 'virgin' territory, ie, along the proposed route in the Poisson River area. The others would be in the vicinity of Twin Falls and Ross Bay Junction and at the intersection with the Esker road (alternate route).

The location of a work camp in a previously undeveloped area has the potential to damage the immediate vicinity of the camp through clear cutting, through parking and driving heavy vehicles through it and through improper clean-up procedures.

Workcamps should be placed back from the road itself and any natural buffers should be left to prevent their visibility from the finished highway. In addition, thorough clean-up procedures should be followed upon completion of

the project.

One final impact which the work camp may have is through the need for supplies. In discussions with CFL Co. it was pointed out that the company would need to know well in advance what supplies would be required by the work camp so that they could make sure they had them in stock. This is probably the case in Labrador West also, but to a much lesser extent, as it is a larger population centre.

Other studies have shown that the concentration of extra people at the work camps raises the potential for increased crime and violence in the area. However due to:

i) the small size of the workcamps, and

ii) the proximity of the workcamps to the permanent communities, it is likely that most employees will go home for the weekends.

CFL Co. have discussed the possibility of vandalism or damage to their control structures located on both the preferred and alternate routes both during the construction phase and beyond. It is expected that they will have to increase surveillance around these structures as a result of the project.

4.2.2. Two Years Post Construction

(i) Introduction

In the assessment of impacts which can be directly attributed to the opening of the Ross Bay Junction to Churchill Falls tote road it is assumed[41] that no other portion of the Trans Labrador Highway will have been completed at this time. The transportation scenario is thus one such as today, i.e. a poor quality gravel road from Churchill Falls to Goose Bay, a tote road from Churchill Falls to Labrador City and a paved road from there leading to

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[41] As per the Terms of Reference for this Study, Department of Transportation, 1984.

Fermont, Quebec. This is a highly improbable situation as tenders for completion of the link from Fermont to Baie Comeau have already been called. It is likely therefore that Labrador West will have a direct road link to Baie Comeau before work on the tote road is more than about a third completed. Conclusions of this impact study, based on the perception Labrador residents have of the tote road, may well be erroneous because of this.

Labrador West would then have vastly increased exposure to the Quebec North Shore and travel opportunities to the rest of Canada. Business opportunities in Labrador West would probably also open up for business people on the Quebec North Shore, eg, improved service contracts with the mining companies. Tourism operators in would also likely experience a faster rise in business than if the tote road preceded the Baie Comeau Road.

The impacts discussed in this section are based on analysis of the questionnaire surveys discussed in Chapter 2. It is during this time period, i.e. shortly after completion of the road, that the main socio-economic impacts, if any, will begin to surface.

Each of the major impact areas will be discussed in turn and any regional differences in the extent of impacts will be highlighted. Other minor impacts will then be assessed and a summary of findings included at the end of the chapter.

(ii) Potential Use of the Tote Road

Movement of People

It is assumed that an average speed of 70 km/hour could be achieved on the tote road. At this rate, the driving time from Labrador City/Wabush to Churchill Falls would be approximately 4.2 hours by the Alternate Route (293 kms) or 3.4 hours by the Proposed Route (240 kms). This difference in travel time

would be greater until such time as the Esker Road could be upgraded to an RCU 80 standard.

For Happy Valley/Goose Bay, it is highly unlikely that there would be any significant amount of use until the road to Churchill Falls is upgraded, particularly the bridges and the Pope's Hill - Mile 60 stretch.

The Noah report in 1974 estimated that approximately 80,000 trips would be made per year on the Trans Labrador Highway. This estimate was based on an all weather, paved highway. In addition, it was made during an economically buoyant period. This is therefore not appropriate for the tote road concept.

The tote road, however, would undoubtedly generate an increase in travel by "tourists" (campers, fishermen, hunters) as well as by local people travelling to shop, visit family and friends. As a summer road, open between June and September between Labrador City/Wabush and Churchill Falls, travellers would include the following:

- cabin owners - travelling to their properties (both alternate and proposed routes, assuming that cabin development would be permitted along the proposed route).
- fishermen (and trappers by ski doo in winter)
- people travelling to the Lake Melville area and Newfoundland on vacation (low volume because of the poor quality road).
- general travel - for shopping, visiting, etc., mainly between Labrador City/Wabush and Churchill Falls.
- business trips for suppliers, etc., which is dealt with in the section following.

Fifty-three percent of those interviewed by the Study Team said they would use the road to visit more with friends and relatives in the province.

Churchill Falls residents would probably benefit most from the road due to their central location. The resident survey showed a higher level of interest in travel by Churchill Falls residents than in either Labrador City/Wabush or the Lake Melville area. The interest of people in using the road for business purposes is quite low, which is understandable considering the length of travel time involved. Based on interviews with CFL Co., it is assumed that, should the proposed route be chosen, the company will continue using the Esker Road to the Esker siding, as long as the tote road is a seasonal facility. However, a use and maintenance arrangement could be worked out between CFL Co and the Department of Transportation.

Considering average climatic conditions, the road would typically not be open until the end of the school year and would close by mid-October. According to the typical pattern a large percentage of Labrador City/Wabush and Churchill Falls residents are away during the July-August period. The road would likely be used by many going to and from vacation, although if the current employee travel policies rema in effect for employees of IOCC, Wabush Mines and CFL Co, then continued high volumes of air travel could be expected.

There would only be around six weeks after the start of school for activities such as sports team exchanges and teacher workshops. This type of movement is therefore expected to be limited by virtue of both the time factor and the cost.

As was experienced on the Burgeo Road, an initial surge of traffic can be expected on the tote road, representing a type of "novelty" effect in which costs are not a primary concern at the outset but become so over time.

Current plans are to have the remaining 25 - 30 kilometres of road and bridge work south of Gagnon completed by the fall of 1987. There would then be a road link to the Quebec North Shore, close to half of which is paved. Of the remainder, the only section which would not be to tote road standards is the Fire Lake to Mount Wright leg. This would mean that, even at an average speed of 50 kilometres per hour, Baie Comeau would be 10.5 hours drive away (539

kilometres.). Montreal would be an additional 661.42 kilometres drive. The 1984 Cost/Benefit Study by ADI Ltd. estimated 8,000 tourist trips per year over the tote road, which would be achieved by 1995, (assuming a road opening in 1990). Half of this traffic is assumed to be incremental to the Canadian economy. The other half would include, presumably, trips by Labradorians between Labrador West and East and between Newfoundland and Labrador as well as "other Canadians". Considering the typical 4 month season which the tote road would have, this would amount to 2,000 trips per month by 1995.

This would seem to be an ambitious assumption for a four month season on a tote road, unless there is a concerted marketing program adopted for the region.

An all-weather road link between Happy Valley/Goose Bay, Labrador City and Baie Comeau would bring with it significant levels of traffic in the long run. The levels are impossible to predict and would depend principally on the development strategy adopted for the tourism industry.

Movement of Goods

The role which the tote road would play in the movement of goods in the region would depend on a number of factors.

Firstly a seasonal road between Labrador City/Wabush and Churchill Falls, with no upgrading of the Churchill River Road would likely have virtually no effect on the Lake Melville area.

Secondly, it would be a doubtful business proposition for a trucking company, for example, to get geared up to provide a service for a four month season. This fact was underlined by businessmen in the transportation sector when interviewed during this study.

As noted earlier CFL Co. has indicated that, should the proposed route be constructed, they would continue using the Esker Road as long as the tote road had a seasonal status (there is potential for this to be altered through

discussions between the two parties). Whichever route is chosen, the new road may give suppliers in Labrador City/Wabush the opportunity to provide goods and services to CFL Co., particularly with a road link to Baie Comeau[41].

Current businesses which could be impacted by the road are the tourism business at Lobstick and the nearby Michekemau Fisheries (not currently operating). The former is dealt with in more detail in the Tourism Component of the EIS. Suffice it to say here that development of the alternate route would greatly enhance its viability whereas the proposed route would put it at a disadvantage. It is understood that the Esker Road would be maintained in winter on an 'as needed' basis.

If the proposed route were chosen over the alternate route, a key factor affecting both businesses at Lobstick would be whether the road link between Lobstick and the tote road intersection would be maintained. CFL Co officials have indicated they will maintain the Esker Road between Churchill Falls and their structures at Gabbro and Lobstick. (If it were not maintained to a sufficient standard to allow normal transportation, then the operations would no longer be feasible.)

Based on general trends in the transportation industry, it is reasonable to assume that, in the long term, most of the freight brought into the study area will be carried by truck. While no specific data is available to support this statement, it is based on the general trend towards trucking which has been taking place throughout North America. It assumes that a Trans Labrador Highway will be built to a high geometric standard and that CN Marine rates will not remain subsidized at their current level. Freight transportation costs are discussed in the following pages.

The task of assessing the feasibility of commodity flows by mode is a difficult one, particularly with an incomplete data base. Forecasting of flows is an imprecise art at best. One would logically conclude, for example, that

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[41]However, the scenarios set out for this EIS do not include a Baie Comeau link as part of the two year post-construction period.

heavy bulk products such as oil would gravitate towards ship or rail transportation where possible. However, transportation of such products by truck has experienced dramatic growth over the last 10-15 years.

The degree to which freight movement would move to an all-weather tote road would be determined largely by cost. Making a comprehensive comparison of costs is outside the scope of this study. An attempt was made, however, to determine the relative costs of trucking goods to Labrador direct from Montreal, the major supply centre for the western region, compared with transporting them through Newfoundland to the port of Happy Valley/Goose Bay.

The current cost of delivering one ton of Freight All Kinds from Montreal to Labrador City via the Quebec North Shore Railway is estimated at $511.00.[42] The two components of this cost are $392.20 for the Montreal to Sept Isles run and $118.80 for the transfer to Labrador City via the QNS &L. Once the Baie Comeau link is established, to truck directly from Montreal to Labrador City (1200 kilometers) could cost in the order of $571.00/ton, if the current trucking costs from Montreal to Sept Isles were to apply[43]. Another major factor is whether there would be any return haulage (the above assumes there would not be). At least two trucking companies operating in Labrador West are currently doing cost estimates for trucking over the road.

The same factors would apply to trucking on the tote road. An estimate by one company currently operating in Labrador, for example, is that trucking charges would be in the vicinity of $30.00/ton from Labrador City to Churchill Falls by the proposed route and $43.00/ton by the Alternate Route. At this rate, to truck from Labrador City to Happy Valley/Goose Bay over the tote road would cost in the vicinity of $66.00 for the proposed route and $80.00 for the alternate route. These rates also assume that there would be no backhaul.

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[42]Estimate provided by Clarke Transport Ltd.

[43]The rate would likely be lower however, due to the longer distance involved, assuming that the gravel portion of the road between Manic 5 and Mount Wright is built and maintained to a good standard.

This could mean total truck transportation costs of $571.00 + $66.00 = $637.00/ton from Montreal to Happy Valley/Goose Bay via the proposed route and $571 + $80.00 = $651.00 via the alternative route. It should be emphasized that these rates are very approximate only.

To determine the real costs of shipping goods from Montreal through Newfoundland to Happy Valley/Goose Bay also would require detailed analysis. Shipping costs for Freight All Kinds by Atlantic Container Express from Montreal to St. John's run at $120.00 - $157.00/ton, depending on factors such as container and shipment size. Terra Transport rates for the same haul (by rail) vary from $114.20 - $171.00/ton. To this rate would have to be added handling and storage costs in St. John's.

CN Marine general freight rates from St. John's to Happy Valley/Goose Bay currently run at $32.00/ton, excluding wharfage and wholesaling charges, which could run at $15.00/ton. This would bring a maximum transportation cost of $171.00 + $32.00 + $15.00 = $218.00 for freight landed in Goose Bay from St. John's. The current subsidy being provided to CN Marine is not known on a tonnage basis. At the time of the Noah report (1974) it was estimated at $115.00/ton. It is likely substantially higher at the present time, with operation of the system costing approximately $25,000,000/annum. It can probably be assumed that while economic prosperity alludes Labrador and at least until an all-weather highway is maintained across Labrador, the CN Marine service will continue with a heavy commitment for subsidization.

Using data presented above on probable trucking costs from HVGB to Labrador City, we can estimate a trucking cost of approximately $200.00/ton for Freight All Kinds by road from Montreal to Labrador City. Using this figure and the data on transportation costs presented above, we can come up with preliminary estimates of moving freight to Labrador City and to HVGB, using the Labrador tote road. These costs are then compared to current costs and modes of transportation to determine potential cost savings to business from using the tote road. Comparisons of costs, assuming a direct road link to Montreal from Labrador City and the removal of the CN subsidy are also made.

Costs of Freight Transportation to Labrador City and Happy Valley/Goose Bay

i) Assuming no road link to Baie Comeau.

Origin	Mode	Destination	Preliminary Cost Estimate
Montreal	Road/truck on railwy.	Lab. City	$571.00/ton
Montreal	Road to rail	Lab. City	511.00/ton
Montreal	Ship (CN) to road	Lab. City via St. John's	284.00/ton (alt. route) 270.00/ton (prop. route)
Montreal	Terra Trans.	Lab City via St. John's	298.00/ton (alt. route) 284.00/ton (prop. route)
Montreal	CN	HVGB via St. John's	218.00/ton

ii) Assuming direct road link from Montreal to Labrador City

Montreal	Road	Lab. City	200.00/ton
Montreal	Road	HVGB	280.00/ton (prop. route) 266.00/ton (alt. route)

iii) Assuming a direct road link and no CN subsidy

Montreal	CN	HVGB	312.00/ton
Montreal	CN to HVGB + truck	Lab. City	392.00/ton (prop. route) 378.00/ton (alt. route)

From the above data, it can be seen that the cheapest method of moving freight from Montreal to Labrador City is by CN Marine and truck across Labrador. Once the road link is completed to Baie Comeau, it will be cheaper to move freight to Labrador City by truck direct from Montreal. However, it is still cheaper for HVGB to receive freight via CN Marine rather than by truck across Labrador. If the CN subsidy is removed, the cost per ton for freight into HVGB from Montreal via CN Marine would be about $312.00/ton. The cost of getting it via Labrador City and the tote road would be $280.00/ton, (ie, costs are comparable, which may not change freight movement patterns).

For Labrador City to get Freight All Kinds via HVGB by truck, assuming no CN subsidy, it would cost $392.00/ton (proposed route). To move it direct from Montreal by truck would cost approximately $200.00/ton.

The very high cost of transportation in Labrador has been singled out for many years as the most important factor contributing to the high cost of living. The most recent group to emphasize this point is the Select Committee of the House of Assembly on Food Prices. Briefs presented to this committee by Labrador groups emphasized also the poor quality and unstable supply of fresh produce including, for example, the lack of many items near the end of the winter season. These were also among the problems brought out during the research undertaken for this Study.

Transportation of goods by the tote road would be unlikely to contribute to lowering the cost of living in Labrador, unless hugh subsidies are implemented or, eg, unless major development takes place in the region which would bring about economies of scale and provide products for return trips by trucks. An all-weather road would undoubtedly bring advantages such as improved quality and more reliable supply of goods. However, it is assumed that the tote road will remain a seasonal road for the two year post-construction period being considered in this section. Therefore, the supply of goods would continue to be via the QNS & L Railway in Labrador West or CN Marine in Labrador East.

(iii) Impacts on Business

The assessment of Impacts on Business are based on the results of the questionnaires completed by 48 Labrador businesses[44] and additional information received from business people in Lobstick and Churchill Falls. The tables referred to in the text can be referenced in Appendix H. The sample of businesses interviewed is first discussed in terms of some general and regional characteristics and then various impacts upon business are discussed in turn.

Business Characteristics

Businesses were classified as to type, size, gross sales and length of time in operation.

As can be seen in Table 4.1 (Appendix H), the vast majority of businesses interviewed fall into the tertiary sector. These included many retail centres, fast food outlets, hairdressers, repair shops and so on. In Labrador West the one industry which dominates the employment picture, mining, represents the primary industry in the sample. A few other business types also appeared in the sample and these are shown in Table 4.1.

Table 4.2 (Appendix H) shows the breakdown of businesses sampled by gross sales category. Eight businesses in the sample refused to give this information. Almost 50 percent of businesses had sales of over $1 million while only 4 percent had under $100,000.

Table 4.3 shows the length of time the sampled businesses have been in operation. Only 12 percent of those interviewed had been in operation for less than 5 years and only 15 percent for more than 20 years.

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[44]Only one questionnaire was returned from Churchill Falls. The tables presented in this section include data from Labrador East and Labrador West only.

Labrador East had a larger percentage of older businesses than Labrador West , a point which reflects the recent growth of settlement in the latter. The average age of business is in the 11 - 15 year category.

As the majority of businesses interviewed were in the retail/service sector it is not surprising that most of them have only a small number of employees (see Table 4.4). Seventy-seven percent have less than 20 employees while only one, a mining company, has over 40. Several of the firms interviewed were construction companies who take on considerable numbers of part time/seasonal employees during the summer months. e.g. one such firm reported hiring 80 seasonal workers last year.

Earlier cost-benefit studies, (Noah & Associates, 1974, ADI, 1984), carried out on the tote road have attempted to quantify the general economic gain which would result from the tote road. It has been generally assumed that an upswing in business would follow the completion of highway construction in and to Labrador. However, if the expectations expressed in Table 4.6 are anything to go by, this will not be the case.

General Perceptions of the Tote Road

Over half of those businesses interviewed said the opening of the Ross Bay Junction to Churchill Falls tote road would be of no advantage to their particular business. There are no significant differences between Labrador East and Labrador West in this respect.

Although over half the businesses said there would be no advantages, almost 90 percent stated that there would be no disadvantage either. Evidently from the business point of view, the proposed tote road is something of a non-event. The only disadvantages mentioned were increased competition and the fact that the tote road would not be an all season highway. This lays strength to the argument that pressure to maintain the road on a year round basis will mount as soon as it opens, if not before.

Expansion of Business

Business people interviewed were asked two main questions on the impact which the tote road would have on the expansion of business in Labrador. The first question asked was whether they would expand their own business with the opening of the tote road and the second, whether they would expect new businesses to set up in the area. The results are outlined in Table 4.7.

Only 21% or 10 businesses interviewed stated that they would expand their business with the opening of the tote road. This supports the results of the previous section when about one third of those interviewed said there would be a general increase in the level of business carried out (Table 4.5), but the majority (52%) felt that there would be no advantage to their particular business from the road.

The various ways in which these businesses intend to expand are laid out in Table 4.8.

Although the percentage of businesses who stated they would expand their business with the opening of the tote road was the same in Lab. West and Lab. East, it is obvious from the Table that impacts will be greater in Labrador West. Individual businesses mentioned more than one way in which they might expand with the opening of the tote road.

Obviously people perceive that there will be a general upturn in the local economy as a result of the road. Business people are expecting others to expand or take advantage of newly created business opportunities.

It is difficult to predict the nature of new businesses which could set up as a direct result of the tote road. The type of business expected by local businessmen is primarily highway or tourism related (see Table 4.10) It is possible that the perception of business opportunities is overly optimistic at this time. However, perception is the basis of all decision making, and if

people believe there will be business opportunities then they will act on the basis of these perceptions.

It could well be that some businesses will set up as a result of the tote road and go out of business again after a short time due to traffic volumes not coming up to expectations or to the seasonal nature of any traffic which is generated by the road.

Isolation/Employee Turnover

The Industrial Inquiry Commission set up in early 70's to investigate the causes of a 3 month strike by the United Steelworkers of America against IOCC and Wabush Mines was forced to the conclusion that the underlying cause of the strike was the dreadful isolation, and more specifically, the absence of a connecting road. High rates of labor turnover and labor unrest throughout the seventies were related to this sense of isolation.

While the situation in the eighties has changed drastically there is no doubt that the area is as isolated,if not more so, than it was in the seventies. (CP Air now has only 1 flight a day into Wabush as opposed to two daily flights in the past.) What has changed is that people have come to accept Labrador City and Wabush as their home; there is much more a feeling of being part of a proper community now.

According to discussions with the President of the United Steelworkers of America, Local 5795, there is almost no labor turnover now and there has not been 1 day lost in the eighties due to labor unrest.

The potential impact of the tote road on labor turnover is in all probability a non-issue in the eighties due to the factors outlined above. However, the questionnaire data revealed some interesting results. Only 12% of those interviewed felt that the opening of the tote road would make it easier to hire employees and only 35% felt it would be easier to retain employees. According to the results presented in Table 4.11 (a) and (b) and as might be expected, a

significantly greater impact on turnover is expected in Labrador West than Labrador East.

Sources of Supply/Market Areas

According to the information supplied by Study Area businesses, there is very little regional integration within Labrador in terms of market areas or sources of supply for goods. The absence of a cheap transportation link across Labrador is perhaps the major factor accounting for this.

The opening of a new road link creates an opportunity for existing businesses to tap new market areas and for new patterns of supply and demand to be created. Labrador West businesses could expand into market areas presently serviced by Churchill Falls businesses and vice-versa. It is not expected that there would be much, if any, change in these factors for businesses in Labrador East while the road to Churchill Falls remains in such poor condition.

Tables 4.12 (a) and (b) display the responses given to statements regarding the impact of the tote road on markets and sources of supply.

In response to the statement, "it will open up new sources of supply", 40 percent of the sample agreed with the statement and almost an equal number (42 percent) disagreed with it. However, there were strong regional differences in response to this statement. Only 21% of respondents in Labrador West agreed with the statement in comparison to 65% in Labrador East. Obviously, businesses in the Happy Valley/Goose Bay area are hoping that, in the long term, the development of a road transportation link across Labrador will decrease their reliance on CN Marine and open up the possibility of goods coming in from Quebec.

There were some significant regional differences in response to the statement "It will open up new markets". 71% from Labrador West were in agreement with this statement in comparison to 50% from Labrador East. The overall percentage of respondents in agreement was higher (67 percent in total).

Impacts on Transportation Costs

Only 27 percent of the total sample agreed with the statement that the tote road would reduce their total annual transportation costs. Significant regional differences in responses are apparent from Table 4.13.

Again it is Labrador East businesses which expect to gain most in this respect.

Twenty-nine percent of the total sample feel that it will be cheaper to obtain goods while a similar percentage feel it will be cheaper to market goods (see Tables 4.14 and 4.15). Labrador East businesses are more often in agreement with these statements than Labrador West businesses.

It is interesting that lower costs of obtaining and marketing goods are perceived in Labrador East while access to new markets is perceived in Labrador West. If this follows then opening of the road link to Baie Comeau would benefit Western Labrador from a business viewpoint and Eastern Labrador from the viewpoint of access to goods.

Other aspects of improvements in the transportation system which were probed by the questionnaire were reliability of shipments, damage to goods in transit and improvement in the quality of produce. Information on these factors is found on Tables 4.16, 4.17 and 4.18.

Forty-five percent of businesses in Labrador East expect that it will be possible to obtain more reliable shipments of goods when the tote road is open. For them the road will be an improvement over reliance on CN Marine. It is highly unlikely that the tote road by itself will have this type of impact and it is probable that this is a reflection of longer term views. This is something which has cropped up consistently throughout both the scoping study and the interviewing. The Trans-Labrador Highway has been discussed for so many years that residents now do not clearly distinguish between the long

term and short term view i.e., they may be thinking about the total link and not the short term, summer link. Responses to some questions may be misleading because of this.

The statement, "It will allow the import of better quality produce," was only relevant to 15 or 31% of businesses interviewed. Of this group, only 3 or 6% of the total sample agreed that this would be a positive impact of the road. All three businesses were located in Labrador East.

Looking at Table 4.18, only 13% of the businesses interviewed agreed with the statement, "It will reduce breakage or loss of goods in transit". Again a larger percentage of this group are from the HVGB area. It is possible that this is more of a comment on CN Marine than a realistic appraisal of what the road will do.

As a summary it can be said that the main impact of the tote road on transportation will be to reduce overall costs for those businesses which use it. Only a small percentage of businesses feel it would have any significant impact on reliability of shipments, quality of produce imported or damage to goods in transit.

Impacts on Level of Sales and Competition

The opening of the tote road has the potential to increase the amount of traffic going into and coming out of each of the Labrador communities in the Study area. As a result, it might be expected that the general level of sales would increase.

In response to the statement, "It will lead to an increase in sales", 65 percent of the businesses interviewed replied in the affirmative. In this case there were no strong regional differences between Labrador West and Labrador East (Table 4.19).

Forty-six percent of businesses interviewed expect that the tote road will lead to increased business competition. The percentage in this case was higher

in Labrador East than Labrador West (see Table 4.20). This relates back to previous data which suggests that the expected flow of goods will be West to East and therefore wholesalers, distributors, etc. from Labrador City will be the ones to benefit. This potential shift in the flow of goods from West to East is also seen as one of the benefits of a Trans-Labrador Highway by the Labrador West Chamber of Commerce. In a written statement to the information session on the Ross Bay Junction to Churchill Falls tote road they point out that Labrador West will acquire the potential to become a trans-shipping point with goods from Quebec being brought in and expedited to Churchill Falls and the Happy Valley/Goose Bay area.

Impacts on Warehousing and Inventory

Due to seasonal variations and overall low frequencies of goods-carrying trips in the current transportation network in Labrador, many businesses are forced to carry large inventories, especially over the winter months, when CN Marine service to the Happy Valley/Goose Bay area is interrupted. It might be expected that the possibility of an alternate transportation link would reduce the need for maintaining large inventories and so reduce the need for warehousing space. As can be seen from Tables 4.21 and 4.22, the impact of the tote road on this factor is perceived to be slight. 21% of respondents said the road would increase the need for warehouse space while 15% said it would decrease the need. 14% of respondents in Labrador West feel the road will increase the need for warehouse space while no one from Labrador East responded in this fashion. This supports, to some extent, the logic of earlier arguments. If the West is likely to benefit more from new markets etc, then increased warehousing might be required there. Table 4.23 also supports this view by showing that larger inventories will be required in Labrador West.

The fact that the majority of respondents have lived in Labrador for more than 10 years means that they are more likely to have a good knowledge of the Study Area and the impacts the tote road may have upon it as compared to if they had lived in Labrador for only one or two years.

General Views on the Tote Road

As a preface to more specific questioning of residents on travel patterns and perceptions of the tote road, the positive impacts of the road as perceived by respondents are summarized in Table 4.25. These findings corroborate the results of the scoping study described in Chapter 2.

The overriding impact of the road will be in making Labrador more accessible and provide an alternate and hopefully cheaper means of travel in and out. This will have a positive contribution towards de-isolation, and lead to the opening up of business opportunities and the development of tourism.

On the negative side, few impacts are readily apparent or are perceived to be non-existent. When asked what the bad things about the tote road might be, over half (56%) the total number interviewed said there wouldn't be any. The largest group (23%) of these who mentioned negative impacts referred to the cost of building and maintaining the road itself. Other negative impacts mentioned were crime or accidents, environmental damage and the possibility of a reduction in the service provided by other carriers at present, e.g. CN Marine.

The results of this question are presented in Table 4.26.

Perceived Isolation/De-isolation

An Industrial Inquiry Commission examining the causes of a 1972 labor dispute between the United Steelworkers of America and the Iron Ore Company of Canada found that isolation was an underlying factor in the labor unrest. Union representatives complained of high rates of alcoholism, divorce and depression in isolated northern communities.

Both these statements and the results of the scoping study suggest that the

resident survey should probe the impact of the tote road on the sense of isolation experienced in the Study Area.

In response to the question, "Do you feel isolated living here?", seventy-nine or 76% of respondents replied that they did feel isolated living in this part of Labrador (Table 4.27).

However, when asked if the sense of isolation bothered them, only 44 or 42% said yes.

Some regional differences were apparent in the degree of isolation experienced. Examination of Table 4.28 shows that the degree of perceived isolation is greater in Churchill Falls than in either Labrador East or Labrador West.

This is perhaps not surprising in view of the location of Churchill Falls, its distance from any other community and the limited travel options available to its residents.

In probing the potential impact of the tote road on this sense of isolation, 35 respondents, (or 80% of those stating earlier that they were bothered by the sense of isolation) stated that the tote road would have a positive effect. Results are shown in Table 4.29.

Interestingly enough there were no strong regional differences apparent in this case as might have been expected. Sixty-three percent of respondents bothered by the sense of isolation felt that the tote road would have a great effect in lessening the sense of isolation while 37% of this group felt it would have some effect.

When asked what the good things about the tote road would be, 40% of the Churchill Falls group said it would help in this respect.

Impacts on the Propensity to Travel

Table 4.30 shows that 83% of residents interviewed said they would use the tote road when it was opened.

Significant regional differences occurred in response to the statement, "It may decrease the need for warehouse space". No one in Labrador West agreed with this but 35% of respondents in Labrador East did. Higher percentages for Labrador East are also found in Table 4.23 with regard to the statement on inventories. Again 35% of this group perceive that the road will allow for smaller inventories.

As might be expected, the percentage of people who replied in this fashion was slightly higher for Labrador West and Churchill Falls, the two communities which will be linked by it. However, 74% of those interviewed in the Happy Valley/Goose Bay area also said they would use the road.

The reasons for using the new tote road are varied but a glance at Table 4.31 shows that the main reason will be to leave Labrador, on vacation to Newfoundland. It is interesting that such a large group of Labrador East residents (11) will use the road to go on vacation elsewhere, presumably to other parts of mainland Canada.

According to the survey results, the road will not be used for business travel to any great extent either within Labrador or to and from it. The length of travel time involved is in all probability too excessive to make it attractive to business travellers who will probably continue to travel by air.

Visits to friends and family within Labrador will be possible using the road (see Table 4.32).

In addition, the tote road will also offer alternate shopping facilities for Labrador residents. It is evident from Table 4.33 that it will be of most benefit to Churchill Falls residents in this respect. Thirty percent of that group said they would use the tote road to shop in Labrador West.

The pattern and frequency of visiting friends and relatives was probed in depth as part of the resident questionnaire. Fifty-three percent of those interviewed said they would visit more with friends and relatives living in other parts of the province. As can be seen in Table 4.33, more residents of Churchill Falls will use the road than in either of the other two Study Area regions.

Table 4.34 shows the destination and trip frequency for the total sample and Tables 4.35, 4.36 and 4.37 breaks the data down for the three sub-regions.

The most frequent use made of the road will be to visit friends and relatives living in Newfoundland as part of the annual vacation. Forty-two percent or 17 Labrador West residents will use the tote road as a means of going on vacation to Newfoundland to visit friends and family, while only 25% (or 5) of Churchill Falls residents and 21% (or 9) of Labrador East residents will use the road for this purpose.

Labrador West residents see this as an improvement over the current method of travel to Newfoundland i.e. via CP Air or the QNS&L Railway. It might be expected therefore that there would be an increase in the number of passengers and cars travelling into and out of Happy Valley/Goose Bay by CN Marine.

Impacts on Fishing, Hunting and Cabin Development

Table 4.38 demonstrates that the tote road will offer increased access to hunting and fishing areas particularly for residents of Labrador West and East.

The percentage of residents who say they intend to build a cabin along the road is 10 percent for both Labrador East and West. Whether or not cabin development will be allowed remains to be seen, particularly in the light of Innu objections to the development (see next section). No one interviewed in Churchill Falls expressed an interest in building a cabin. There is however considerable cabin development by Churchill Falls residents already along the

Esker Road. A large percentage of the population therefore has access to fishing and hunting resources through cabins or through visiting friends with cabins.

(v) Impacts Upon the Innu

Political Implications

It is a fundamental belief among the Innu Leaders in Sheshatshui and Lobstick that it is only by securing control of a proper resource base that they can effectively ensure the survival of their people as an ethnic and cultural group. The social and spiritual values long associated with their traditional lifestyle remain, despite the current malaise. Many professionals familiar with the Innu - doctors, social workers, anthropologists among others - agree that it is only in the context of the bush camp and the caribou hunt that their collective cultural integrity and individual well-being are maintained.

Innu leaders in Labrador may eventually engage in negotiations with the Federal and Provincial governments to secure the lands and resources needed to guarantee their peoples' future. Alternatively, in the face of a perceived threat, they could choose to pursue litigation as well as negotiation.

While the tote road itself may pose no immediate threat to the lands and wildlife that concern the Innu, it is commonly assumed by them and by Labradorians generally that construction of the tote road will inevitably lead to further upgrading of the adjoining sections, culminating in the completion of an all-weather highway traversing Labrador and connecting with Quebec. It is also assumed that this in turn will almost certainly lead to the industrial development of various resources such as timber, minerals and water which can thereby be accessed. Such development the Innu leadership in Labrador would view as particularly threatening.

Socio-economic Impact

It has been suggested that the Innu people of Sheshatshui and Lobstick will themselves benefit from the completion of the Tote Road.

Firstly, there will of course be the opportunity for employment in the construction phase of the project. It is doubtful, however, that more than a handful of Innu will seek employment with the construction crews. Considering the high rate of unemployment throughout Labrador, the unemployed and unskilled will be at a competitive disadvantage.

Secondly, there may be further employment generated by developments in tourism and recreation which completion of the road is expected to precipitate. Given their background as woodsmen, the Innu would be perfectly suited to be trained as guides and/or operators of fish camps, hunting lodges and wilderness tours. This would be work of a seasonal nature only and there is not likely, in fact, to be much of it.

Assuming that the tote road does lead to development in tourism and recreation, it is unlikely that such will provide much employment for the Innu. There is no lack of unemployed or underemployed non-Innu Labradorians, especially in the Upper Lake Melville area, who have the requisite skills as woodsmen. Such men would not have to contend with the barriers of language and culture that will confront many Innu. Therefore, any Innu enterprises aimed at tourism development would have to be well researched and prepared for in terms of training, marketing and development.

Thirdly, the anticipated increase in tourist traffic into the Lake Melville area will create a significantly larger market for Innu handicrafts. At present there are very few Innu in Sheshatshui who are deriving any income from the sale of crafts. However, it is not the lack of a market which poses the obstacle to development in this area. A recent attempt to establish a craft workshop and retail outlet failed for entirely different reasons, chiefly problems of organization and administration.

Fourthly, there is, at present an Innu consulting firm, based in Goose Bay, that is exploring the feasibility of two projects which, it is believed, will be assisted by the road; one, the whitefish fishery at the Smallwood Reservoir referred to elsewhere in this report, the other a commercial caribou harvest based near Esker.

It is doubtful whether either venture would be appreciably aided by the construction of the tote road. Both sites already have transportation links to the outside, road and rail in the case of Esker. The chief obstacle to a viable whitefish harvest is funding, management of the enterprise and marketing, not transportation, unless, as noted earlier, the proposed route is developed and a link from Lobstick to the road is not maintained to standard. A commercial caribou harvest in that region would probably be based on a fly in-fly out arrangement and not be dependent on road access.

Ecological Concerns

Of primary concern to the Innu are the caribou. Most of the traditionally hunted herds still exist in Labrador. However, the Red Wine (northwest of Happy Valley/Goose Bay), Lac Joseph and Mealy Mountain herds (south of Lake Melville) are mere fragments of the vast herds that once roamed the bush and barren land. Their numbers have crashed, perhaps repeatedly, in this century for reasons largely unclear to wildlife authorities.

The Lac Joseph herd is in a particularly vulnerable position. It ranges the country south and east of Ross Bay Junction. Already depleted, this herd could well face extinction. The ready access to these caribou, particularly from the proposed route, will provide increased potential for over-hunting.

Only the George River herd has recovered, and dramatically, thanks largely to the isolation of its range in northern Labrador and Quebec. Now estimated to be more than 500,000 strong, this herd continues to grow at a rapid pace, about 13% annually.

It has also begun to expand its range southwards. Indeed, caribou have recently been sighted in the vicinity of Schefferville. During the hunting season last year, the herd moved into Labrador West (MacPhayden River area, north of Labrador City) in great numbers for the first time in many years. It is entirely possible that, if unimpeded, this southernly shift could result in the replenishment of the Red Wine and Lac Joseph herds, and in a general expansion of range south and east towards and perhaps across the Churchill River. Much of this country offers a suitable habitat for caribou, and in fact it was once part of their original range.

Such a development would be eagerly welcomed by the Innu of Labrador, and by those of the Quebec North Shore as well. The caribou they so avidly seek would be appreciably more accessible than at present. Hunters would no longer be entirely dependent on the limited number of aircraft charters organized by the Band Council.

Presumably, many non-Innu Labradorians would be appreciative as well. Whereas now these caribou are only accessible by charter for residents of Labrador West and the upper Lake Melville area, in time they could be approachable by skidoo (as was the case last year in Labrador West).

It is unlikely that the tote road would impose any more of a barrier to migrating caribou than existing transportation corridors, namely the QNS&L rail line and the Esker Road.

(vi) Resource Development Opportunities

Role of Transport in Economic Development

Investment in transportation infrastructure is sometimes coloured by the notion that economic growth will automatically follow: that transportation infrastructure has a causal and positive role in the development process. By way of illustration this view is captured by the following description of the impact of the development of the Argentinian railway system:

"The railways were advancing league after league into the desert and as fast as they advanced they made new settlements blossom forth as if by magic on both sides of the right of way: and they were converting the barren fields into inexhaustible springs of wealth."

V.Y. Gonzales

Other writers have suggested that transportation infrastructure is a "pre-condition" or "pre-requisite" for development. While it is axiomatic that economic development requires adequate, effective transportation facilities and services, much of the literature on the economic history of transport indicates that growth in infrastructure has tended to follow, rather than precede economic growth, and that in many cases it can be shown not to have been the "indispensable" factor that it is often thought[45] . Fishlow (1965), for example, has further argued that few, if any, innovations are "indispensable" to economic growth as the range of potential solutions to specific problems is usually so large that no individual factor is even capable of being a "prime mover".

Transportation infrastructure should therefore be viewed as but one factor in the development process; a necessary, but not a sufficient condition for growth and development. Other factors must be present in the form of human, physical and material resources before transportation infrastructure becomes a meaningful ingredient in the growth process. Owen (1964) has summarized this view, stating that:

"...the fact remains that the provision of good transportation is not capable by itself of promoting economic growth. It is only where there are resources to be developed and people capable of developing them that transport becomes the catalyst that transforms land and resources that people need."

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[45]See for example, Cootner (1963), Fogel (1964), Heyman (1965), Hunter (1965); Pegrum (1963).

The provision of the tote road, or indeed the completion of the link between Eastern Labrador and the Quebec North Shore will not therefore automatically result in the development of mineral, forest, water, or other resources in the region. Present evidence indicates that outside of small-scale tourist operations, there are potentially few commercial opportunities (eg, in mineral deposits, forest or agricultural resources) in the region which could take advantage of the tote road. On the other hand, the potential for the development of hydro-electric power in the region is significant, but development appears to be less a function of the presence or absence of a transport link than it is a function of capital and markets. In short, as was the case with the Burgeo Road, for example, the primary impacts may well prove to be primarily of a social and psychological nature rather than economic.

4.2.3 Future Conditions - Ten Years Post Construction

As stated previously, the impacts of a seasonal tote road from Labrador City/Wabush to Churchill Falls are expected to be small in comparison to the impacts generated by an all-season road linking Happy Valley/Goose Bay to the Quebec North Shore. Although it is extremely difficult to predict the level of impact with any degree of accuracy, the following general points would apply.

- With proper marketing, the potential exists for a substantial increase in resident and non-resident tourism.

- The road would make possible a permanent flow of freight traffic across Labrador. This would open up alternate sources of supply to both Labrador East and West, with benefits to all sectors of the economy.

- An all-season road link would encourage more inter-community exchanges, both on the individual and group level and greatly reduce levels of isolation.

- Assuming no land claim settlement with the Innu, an all-season, Trans-Labrador Highway,in the long term could exacerbate the potential for negative impacts perceived by the Innu. These impacts have been discussed in Section 4.2.2. and in the Native Resource Use Study.

The information presented in the following section is based primarily on the results of the two questionnaires and covers future route scenarios.

(i) An All Season Tote Road From Labrador City to Churchill Falls

Responses in this section assume no upgrading of the Churchill Road and no road link to Baie Comeau, (Table 4.39, Appendix H).

If the tote road were to be kept open all year round, 61% of the total

number of respondents stated they would use it in winter. The percentage replying in this manner was highest in Churchill Falls. These people would use it mainly to take advantage of shopping facilities in Labrador West and to visit friends and family. Of the total sample, the largest percentage stated that they would use the tote road in winter to leave or go on vacation. The percentage in this category was highest for Labrador East and for them the road offers a relatively cheap alternative to air travel and the option of winter travel when CN Marine is not operating during the winter months. Should the QNSLR drop its passenger service from Labrador City to Sept Isles however, this would not prove feasible.

Businessmen interviewed were asked what impact an all-season tote road would have on their business. As can be seen from Table 4.40, the greatest impact of such a road would be to enable local business to expand and tap new markets. This was most often seen as an impact in both Labrador West and Labrador East. Increased competition and de-isolation were also mentioned by Labrador West business people while reductions in warehousing and inventories were seen as an impact in Labrador East. However, despite a number of impacts being mentioned, 50% of businesses interviewed in Labrador West could see no impact on their business resulting from an all-season tote road.

Should an all-season road follow the alternate route there would likely be a substantial increase in the number of people travelling the Esker Road from Churchill Falls to take advantage of shopping and recreational facilities offered in the Labrador City/Wabush area. As a result of this, the Lobstick Lodge would in all probability experience a substantial increase in business serving the travelling public. If the proposed route is chosen, the Lobstick Lodge would probably experience a considerable reduction in business.

An all-season tote road may exacerbate the negative impacts which the Innu feel will almost definitely result from development. These include increased access to the Lac Joseph Caribou herd, a general increase in traffic in the area and increased potential for other developments related to the road.

The proposed tote road was seen as having a positive effect on perceived

isolation in Labrador. An all-season road would go further in this respect and would have its greatest effect on residents of Churchill Falls who could then travel to the larger centres in Labrador West for shopping and recreation.

It is probable that inter-community activities between Labrador West and Churchill Falls will show an increase due to cheaper costs of road travel. Money now used to fly teams between the two centres could be spread over a larger number of teams or events if travel was by road. Teacher workshops involving teachers from both Labrador West and Churchill Falls could be held in either centre.

(ii) An All Season Trans-Labrador Highway

With the completion of the tote road from Labrador City to Churchill Falls there will undoubtedly be pressure exerted on government by Labradorians for the upgrading of the existing "Freedom Road" from Churchill Falls to Happy Valley/Goose Bay. Should this occur, there would be a good quality highway linking Labrador West with the Happy Valley/Goose Bay area and significant impacts are likely to occur. The most important of these impacts will be changes in resident travel patterns and in the transport of goods and raw materials required in all parts of the Study Area. These impacts have already been discussed in Section 4.2.2.

Seventy-six (76%) percent of those interviewed during the resident survey (Table 4.41) said they would make use of such a road. The community of Churchill Falls was the one with the highest percentage of people responding in this way. The lowest percentage (54%) was found in Labrador West. The main reason residents said they would use the Trans-Labrador Highway was to leave Labrador on vacation and, to a lesser extent, to visit friends or family. Interestingly, it is residents of Labrador East who will make most use of the road for this reason. Only 24% of residents from Labrador West said they would use the road for this purpose. As is evident from Table 4.41, the Trans-Labrador Highway will offer alternate shopping facilities to residents of Churchill Falls - 40 percent of those interviewed said they would use it for this

reason.

(iii) All Season Tote Road Linked to Baie Comeau

As has been mentioned before, it is highly probable that the remaining section of road between Labrador City and Baie Comeau will be completed before the tote road to Churchill Falls. With the completion of the link to Baie Comeau comes the first direct road link to the rest of mainland Canada.

Almost everyone interviewed said they would use this road (88%) and the main reason again would be that it offers an alternative means of leaving Labrador on vacation (Table 4.42). Surprisingly, there was no difference in the percentage of residents from Labrador East and Labrador West who would use the route to Baie Comeau for this purpose. It seems surprising that residents from Labrador East would drive West to leave on vacation rather than use the current service offered by CN Marine. Alternatively, the road to Baie Comeau may offer a change in vacation patterns for Labrador East residents and many more of them will now find the rest of mainland Canada an attractive and feasible vacation destination.

The main impacts of the link to Baie Comeau on Labrador business will be to provide a cheaper or alternate means of transporting goods and to lead to a general expansion of business or markets. In Labrador West, this is probably associated with the perception of serving as a trans-shipment point, ie. goods from Quebec via Labrador West to the rest of Labrador. As can be seen from Table 4.43, this road link will have a major effect on de-isolation in Labrador West. In Labrador East, it is expected to reduce the need for warehousing space and the requirements to carry large inventories. This is because it will now be feasible to truck in goods in winter via Labrador West when CN stops its service during the winter months.

CHAPTER 5: SUMMARY OF FINDINGS

5.1 The Existing Condition - A Summary

The Study Area, for the purposes of this impact assessment, includes the communities of Labrador City/Wabush; Churchill Falls; and Happy Valley/ Goose Bay/North West River/Mud Lake/ Sheshatshui. These are referred to respectively as Labrador West, Churchill Falls and Labrador East.

Demography

Rapid and erratic population growth was characteristic of all three areas from the 1940's and 1950's to the mid 70's. This growth was attributed to rapid in-migration of labor to work in:

i) the mining industry in Labrador West,
ii) construction of the hydro facility at Churchill Falls, and
iii) construction and operation of the military base in Goose Bay.

Population peaked in the mid to late seventies. Decline in population has been caused by out-migration of labor due to:

i) decline in world market for iron ore and increased competition,
ii) completion of construction at Churchill Falls, and
iii) pull out of USAF from Happy Valley/Goose Bay.

Current population totals[46] are estimated as follows:

Labrador City	10,832	Happy Valley/Goose Bay	7,310
Wabush	2,968	North West River	515
Churchill Falls	847	Mud Lake	77
		Sheshatshui	600

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[46]Estimates based on 1984 Family allowance Data, or discussions with Town Managers

In general, the Study Area is characterized by a youthful population. Compared to the provincial average, there are high percentages of children in the 0 - 4 age group, and much fewer old people. Trends indicate a slightly maturing population and large numbers of young people entering the labour force.

Housing

Housing in the Study Area is generally of recent construction and in fairly good condition. There is a wide mix of housing types in the three areas. High vacancy rates exist in Labrador West; there are none or very few vacancies in Churchill Falls. Mobile homes have been common in the past, to accommodate large increases in population. In Sheshatshui, a lot of the housing is in poor condition.

Employment

Labrador West - Employment is dominated by the primary sector ie. mining industry. The Towns have had a small tertiary sector which has recently begun to grow.

Churchill Falls - Employment is primarily associated with the operation of the hydro facility.

Labrador East - No one sector dominates. The region has a more diversified economic base than in Labrador West. In Happy Valley/Goose Bay there is an emphasis on military and the general public service related to the town's function as the major administrative centre in Labrador.

Unemployment

Rates of unemployment are lower than might be expected in Labrador West as many people have left the region when laid off. Unemployment rates are generally much higher among females than males. Rates are highest in North

West River and Sheshatshui. The largest % of unemployed are laborers.

Following are the numbers of unemployed (ie. those in the labor force actively seeking work) as of March 31st, 1985.

Labrador City/Wabush	837
Happy Valley/Goose Bay	1,025
North West River	184
Sheshatshui	124

Incomes are, on average, higher in Labrador West and Churchill Falls. In addition, these people working for IOCC, Wabush Mines and CFL Co. receive generous travel subsidies.

Sheshatshui has the highest levels of unemployment and the lowest income levels.

Northern Benefits

IOCC, Wabush Mines and CFL Co. provide travel benefits for employees. The Federal and Provincial Governments give northern allowance pay. The Federal allowance is currently tax free although there is a possibility that this will change. Other special tax incentives, such as a tax on building materials, also apply in Labrador.

Land Use and Controls

Most land in the Study Area is held by the Crown. CFL Co. holds 35 - 40 ninety-nine year leases in the area. This land is under mortgage, having been used as security for loans. Other leases include those held by cottage owners.

Sheshatshui

The Community of Sheshatshui was used as a summer camp site by the Innu until this century. The Provincial Government constructed wooden houses in the 1950's as part of an effort to sedentarize the Indians. By the end of the 1950's, the majority of Innu had abandoned their nomadism and taken up quasi-permanent residence in the village.

Many still pursue an extensive land-use pattern. Individuals hunt and trap in the vicinity of the village and harvest firewood.

During the Fall and Winter, many residents have gone to the interior of Labrador in recent years, via aircraft charter, to hunt caribou.

Innu recognize no proprietary interest to land and resources among themselves. They are subject to regulations and restrictions on their use of wildlife resources by the Provincial Government and resent this.

The Community of Sheshatshui is governed by a Chief and a Band Council.

There are high levels of alcoholism and drug abuse. Criminal infractions are abnormally high.

While Sheshatshui is slightly larger than North West River, the RCMP estimate that it accounts for 85 to 90% of their work load in the two communities. Upwards to 90% of all incidents are alcohol-related.

Current Use of the Road System

The Esker Road is maintained and used by CFL Co. to transport supplies in from the Esker siding (weekly food shipment; 1500 tons of goods/year). The company also uses it for access to their control structures. Other uses are:

- Lobstick Lodge

- Innu community at Lobstick Lake
- Proposed Whitefish harvesting operation near Lobstick Dam - Michekemau Fisheries
- Approximately 120 cabins scattered along the road, owned principally by Churchill Falls residents.
- Limited travel by Labrador West residents via the QNS & L.
- Access to hunting and trapping areas - Twin Falls Road; Esker Road; Ross Bay Junction Road.

In 1983 & 1984, over 200 vehicles per year travelled east from Esker. A similar number travelled west to Esker. The Ross Bay Junction Road is being used increasingly by Labrador West residents as they set up cabins in the area. For example, there are currently around 80 cabins existing or being built on the Ashuanapi River, which have mostly occurred since the Ross Bay Junction Road was constructed.

The Churchill River Road is being given limited use due to its poor condition. Uses include:

- 40± cabins.
- Limited travel by Labrador West and Churchill Falls residents to Happy Valley/Goose Bay.
- Proposed Motel and gas bar at Cache River.
- Limited trucking of goods (construction materials, household effects from Happy Valley/Goose Bay to Churchill Falls.)

A trailer park has been proposed (approval received from Crown Lands Division) at Lac Grand Hermine on the Ross Bay Junction Road.

5.2 Summary of Impacts

5.2.1 Future Conditions: Without the Tote Road

Many aspects of the social and economic life will remain much as they are today. A "steady state" is expected in terms of population levels in Labrador West and Churchill Falls, and a slow growth in Happy Valley/Goose Bay due to its function as a regional service centre and recent plans by the Federal Government to upgrade the airport. Should DND plans to establish a NATO base at Goose Bay be realized, there would be a substantial population increase in that area.

In terms of economic development the only potential for major development in the extended Study Area is that of a hydro-electric installation on the Lower Churchill and exploitation of the timber resource on the south banks of the Churchill River. These developments would depend on whether funding and markets will be found rather than on whether a road exists to the site. The iron ore mining is not expected to pick up before the late 80's and no increase in labour requirements are expected due to the automation and increased productivity of the systems.

There is a sound development potential in the Michekemau Fisheries plant near Lobstick Dam.

5.2.2 Future Conditions with Tote Road - During Construction

Impacts Related to Workcamp Location

1) There is (limited) potential for destruction of the environment around the workcamp through increased hunting/poaching, resulting in general degradation of the area and an erosion of tourism potential. Sites will need to be rehabilitated after use.

2) The community of Churchill Falls will have to know the expected

demands for supplies in advance so it can order in necessary items.

3) An increase in surveillance may be required at the CFL Co. control structures.

The economic impact of the project on the Labrador economy will depend on factors such as the number of Labradorians which are hired, the quantities of goods and services purchased locally and the extent to which successive rounds of spending retain project funds within the economy. In terms of direct and indirect employment, a general estimate is that for every job generated in the construction sector an additional 1.058 jobs would be generated through successive rounds of spending. Income multipliers for labor suggest that for every dollar of direct income, an additional $0.90 will be generated in the local economy. It has been estimated (ADI Limited, 1984) that $9.4 million or 350 - 400 person years to work will be spent in wages during the project. Using the above multiplier, this could mean a maximum of $17.86 million generated in the region. However, it is unlikely that this maximum will be achieved due to the potential for leakage noted above.

5.2.3 Future Conditions: Two Years Post Construction

As a general overview it can be said that the main impacts associated with a seasonal tote road will be social and psychological rather than economic. Evidence also suggests that positive impacts will dominate and that the majority of Labradorians are in favour of such improvements in the transportation infrastructure. People interviewed see the project as part of something much larger, ie. an all season Trans-Labrador Highway linked to Baie Comeau. For residents of Labrador West the road connection to Baie Comeau is of more importance than the link to Churchill Falls. For residents of Labrador East (Happy Valley/Goose Bay) the proposed tote road is of little value without the upgrading of the existing Churchill River Road.

The proposed tote road is only a small link in a future Trans-Labrador

Highway linked to Baie Comeau. Its impacts may well fade into insignificance in comparison to the overall road. In addition the impacts produced by the total route scenario will be quite different to impacts assessed by the sum of the various parts. Use/impacts of the Ross Bay/Twin Falls route may change significantly with completion of the link to Baie Comeau or the upgrading of the section to Happy Valley/Goose Bay.

Impacts On Business

Our assessment of impacts on business is based on informal discussions with Labrador businessmen and on the results of a questionnaire addressed to 49 Businesses.

Labrador City/Wabush	-	28
Happy Valley/Goose Bay Area	-	20
(Churchill Falls discussed separately)	-	1

General Perceptions

Business people were asked what advantage the tote road would be to their particular business. Fifty-two percent of those surveyed said it would be of no advantage; 90% surveyed said it would have no disadvantages. The advantages mentioned were:

i) a general increase in the level of business,
ii) improved transportation, and
iii) general opening up of Labrador.

Disadvantages mentioned were:

i) the fact that it would only be a seasonal road, and
ii) the cost of building and maintaining it.

Expansion of Business

Twenty-one percent will expand their business with the opening of the tote road - by increasing their market area, hiring more employees or expanding premises. Fifty-six percent think the tote road will result in new businesses setting up - primarily tourism or highway related.

The perception of new business opportunities may be greater than that which will actually exist. However, business decisions are made on the basis of perceptions. It is possible that new businesses will set up and go under when the initial surge in traffic volume decreases (c.f. the Burgeo Road).

De-isolation/Labour Turnover

The impact of the tote road on this factor is perceived to be greater in Labrador West than East. In total, 12% feel it will be easier to hire employees; 35% consider it will be easier to retain employees.

Sources of Supply/Markets

Sixty-seven percent agree that the Road will open up new markets. Labrador East businesses are expecting, in the long term, that the development of an all-weather Trans-Labrador Road link will decrease their reliance on CN Marine, and enable them to bring in fresh produce in winter.

Cost of Obtaining/Marketing Goods

Twenty-seven percent feel that the tote road will reduce overall transportation costs. It will be cheaper for them to obtain and market goods. The impact of the tote road on the reliability of shipments, the ability to import better quality produce and in reducing loss or damage to goods and services is expected to be slight. The main impact will be to reduce costs for those businesses which will use it.

Impact on Sales

Sixty-five percent of businesses feel that there will be a general increase in sales as a result of the tote road. This will result from more traffic using the road and from the possibility for businesses to tap markets in other centres. The effect is expected to be greatest in Labrador City/Wabush and Churchill Falls. There may be the opportunity for more private businesses to develop in Churchill Falls depending on the future role of CFL Co. in controlling business in the town. There will almost certainly be a continued growth in the tertiary sector in Labrador West as a result of the project.

Forty-six percent of businesses interviewed felt there would be increased competition. This was not viewed as a negative impact but one which would be an added stimulus to business.

Warehousing/Inventories

A small percentage of businesses surveyed said the Tote Road would allow a decrease in warehousing space and the size of inventories required. This was especially so in Labrador East.

Impacts on the Propensity to Travel

Assessment of impacts was based on the results of the resident survey. 104 interviews were completed by telephone:

Labrador West - 41
Labrador East - 43
Churchill Falls - 20

General Perceptions

The overriding impact will be in making Labrador more accessible and providing alternate and hopefully cheaper means of travel in and out. This is seen as making a positive contribution towards de-isolation, leading to the

opening up of business opportunities and the development of tourism in Labrador.

Fifty-six percent said there would be no negative impacts associated with the road. Others mentioned damage to the environment, accidents and crime, and the possible reduction in subsidies by CN Marine.

Isolation

The road is seen as having a positive impact upon isolation. This will probably be the main positive impact of the Labrador tote road.

76% respondents feel isolated
42% respondents are bothered by it.
63% of the above group feel the tote road will have a positive impact on the sense of isolation experienced.

Use of the Road by Residents

Eight-three percent of those interviewed will use the road. The main impact of the tote road, particularly for residents of Labrador West, will be to offer an alternate/faster means of leaving Labrador on holidays. It will stimulate some visiting of friends and family within Labrador and offer increased shopping opportunities - for residents of Churchill Falls in particular. Fifty-three percent said they would visit more with friends and family as a result of the road.

The use of the tote road to get out of Labrador will lead to possible increases in the number of people using the QNSLR and CN Marine. There will be more of a swing to leave Labrador via Happy Valley/Goose Bay than via the QNSLR.

Fishing, Hunting and Cabin Development

Almost half of those interviewed said they would use the Tote Road to get to

new fishing and hunting areas. Only a few intended to build a cabin along it.

Northern Benefits

(i) Travel Subsidies

With the opening of an all-season tote road, there is the possibility that the current levels of travel subsidy would be reduced. However, discussions held with union officials in Labrador West, reveal that the unions have been given assurances by the mining companies that this will not happen. Similar comments have been received from officials with CFL Co.

(ii) Salary

Financial benefits awarded to Federal Government employees in northern areas are calculated on the basis of a 'Nordicity' Index. As one of the factors used in arriving at this index is isolation, it is highly likely that improvements in road transportation, particularly an all-season Trans Labrador Highway, would lead to a reduction in this benefit. This has happened in other areas when new road links have been established. For example, when the Northern Peninsula Highway was completed, federal employees in St. Anthony took a cut in their Northern Allowance. (the details of the reduction are not available to us at this time)

The Northern Allowance benefits awarded to provincial employees is lower than for their federal counterparts. As attempts have been made over the past several years to achieve some degree of parity between the two, it is unlikely that there would be any reduction in benefits to provincial employees as a result of the tote road.

Impacts on the Innu

Positive impacts caused by the tote road include:

i) the possibility of establishing a guiding/outfitting business,

ii) stimulation of the craft industry through the general increase in travel,

iii) the possibility of developing the Michekemau Fishery,

iv) the opportunity to engage in wage employment on the construction of the road.

Although the road offers economic opportunities to the Innu as to any other group in Labrador, the Innu feel disadvantaged both culturally and linguistically. They should be well informed of any job opportunities which arise on the project and given technical advice and financial assistance to undertake the business opportunities outlined above.

Innu leaders believe that only by securing control of a proper resource base can they ensure survival of their people as an ethnic group. Only in the context of the bush camp and the caribou hunt can their collective cultural integrity and individual well being be maintained. Their position is that they remain a sovereign people possessed of an aboriginal title to those lands.

Although native land claims are beyond the scope of this study, the impact which the tote road could have on the caribou population and therefore the survival of the traditional Innu way of life is a real concern of the Innu and must be given major emphasis.

Findings of the Wildlife Component of the EIS suggest that the drastically reduced Lac Joseph caribou herd would be further threatened by the proposed route. The alternate route could present much less of a threat to the herd. The proposed route presents the greatest threat to management of the Lac Joseph herd and therefore the greatest impact upon the Innu way of life in the long term. If this route were constructed, there would have to be a major increase in surveillance by the Provincial Wildlife Division to prevent poaching.

There is no reason to expect an increase in crime directed towards the Innu as a result of the project. The labour requirements of the project are small and no in-migration is expected. Should the caribou herds be seriously depleted as a result of the project then this factor could contribute towards the continued cultural disintegration of the Innu people.

Impact on Large Scale Development

Transportation infrastructure by itself will not lead to large scale resource development in Labrador. The development of the Lower Churchill for example, could go ahead with or without a road link. The viability of the project is more dependent on markets and financing.

Impact on Inter Community Activities

Impacts will be minimal due to the seasonal nature of the road. In the long term, an all weather road could significantly increase the level of intercommunity activity through providing a much cheaper transportation link than the present air travel. This would reduce costs for example to sponsors of athletic teams, who currently fly people out to compete in events.

Potential Use of the Road

Seasonal Tote Road

An average speed of 70 km/hr is assumed. At this rate, travel times would be as follows:

Proposed Route	-3.4 hours - Labrador City to Churchill Falls
Alternative Route	-4.2 hours - Labrador City to Churchill Falls

The road is expected to generate an increase in travel by campers, fishermen, hunters and Labradorians going to shop, visit friends, family and to leave Labrador on vacation. It is not expected to be used much for business due to the travel time involved.

Impacts upon the Lake Melville area will be minimal until the Churchill Falls Road is upgraded to tote road standards. Inter community activity will be limited due to the seasonal nature of the road, ie. it will be open mainly during the vacation season when a large percentage of residents in Labrador West and Churchill Falls have left the area.

The ADI Cost Benefit Study (1984), estimated 8,000 tourists trips would be generated per year on a seasonal road, or 2,000 trips per month during the open season, by 1995. Fifty percent of this would be incremental to the Canadian economy.

The impact of the seasonal tote road between Labrador City/Wabush and Churchill Falls upon freight movement is expected to be minimal.

The flow of goods from the Esker siding to Churchill Falls will continue, even if the proposed route is constructed, unless a use and maintenance arrangement can be worked out between CFL Co. and the Province. It would not be feasible to use the new road for only three months of the year. There could be some additional movement of freight along the tote road, however, the volume is expected to be very low.

Should Michekemau Fisheries go into operation, it would not be affected by the seasonal road. If the proposed route were constructed, the company would have a choice of using it or the Esker Road, as the latter would be maintained by CFL Co. Ltd.

Land Use and Controls

All of the land leased by CFL Co is under mortgage, having been used as security for loans. If portions of this land were proposed for public use, eg the tote road or associated developments, the company's bondholders would have to be satisfied that CFL Co's rights to operate and develop would not be affected. This would involve a redefinition of CFL Co's land holdings and may mean that the Department of Transportation would be responsible for any legal costs

incurred as a result.

5.2.4 Future Conditions; Ten Years Post Construction

All Weather Road - Labrador City/Wabush to Happy Valley/Goose Bay With a Link to Baie Comeau

According to current plans, the Baie Comeau link seems certain to be completed before an all-weather link across Labrador, and probably before the seasonal tote road is completed.

Particularly with the link to Baie Comeau, the potential for the movement of people and goods over the road rises significantly. In terms of people movement, however, the amount of driving involved (Happy Valley/Goose Bay - Baie Comeau - around 1030 kms via the proposed route) would limit the potential for travel to and from Labrador. Given the high level of interest expressed by Labradorians in use of the road in the Resident Survey, a high level of use for intra-Labrador travel can be expected. Accompanying this activity would be opportunities for highway related business such as that proposed at Cache River on the Churchill River Road and at Lac Grand Hermine on the Ross Bay Junction Road. Additional opportunities at Lobstick (alternate route) or the Ossakmanuan Lake or Poisson River areas (proposed route) would likely result.

In terms of freight movement, it is quite clear that transportation by the tote road would replace the extremely expensive air freight mode now in operation, particularly during the winter months (eg., CP Air's current rates for general cargo from St. John's or Halifax to Goose Bay - $1,390/ton-$2,500/ton for air express). In 1982, just under 2,300 tons of general cargo was handled by Wabush, Churchill Falls and Goose Bay airports. It is assumed that a large percentage of this would have been trucked over an all-weather tote road.

To make conclusions about the potential transfer from rail and marine to road transportation is more difficult.

The single greatest factor affecting the cost of freight moved into the Study Area (ie. Labrador East) is the Federal Government subsidy applied to CN Marine. The Noah Report (1974) estimated this to be $115/ton. The current level is assumed to be substantially higher, although the exact amount is not available. Total freight carried by CN Marine between Newfoundland (St. John's and Lewisporte) and Happy Valley/Goose Bay in 1982 and 1983 was 54,748 tons or 27,374 tons/year.

There are currently no plans to change the CN Marine subsidy and it is assumed that it will remain in effect as long as Labrador remains an economically depressed region, unless comparable subsidies are applied to truck transport. In addition, CN Marine has extensive plans to modernize its fleet and improve its service with further conversion to containerization.

A full account of the costs of transporting freight into the region and how it could be affected by the introduction of truck transportation is beyond the scope of this Study.

It seems clear, however, that trucking costs across the Study Area to Happy Valley/Goose Bay would far exceed those of CN Marine costs from Newfoundland. As an example, trucking and Railway costs for Freight All Kinds landed in Labrador City from Montreal via the North Shore Highway and the QNS & L Railway are approximately $500.00/ton[47], assuming no back haulage. The cost of shipping Freight All Kinds from Montreal to St. John's and to Happy Valley/Goose Bay amounts to approximately $220.00[48], considering wharfage fees and wholesalers costs in St. John's. While there are several factors which could alter these figures and possibly bring them closer together, it is clear that, for certain types of freight, trucking is unlikely to compete on a cost basis with the marine transport mode, given the current rate structures.

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[47]This figure provided by Clarke Transport Ltd.

[48]Rates supplied by Atlantic Container Express and CN marine.

There may be the possibility of trucking west from Happy Valley/Goose Bay, should the CN Marine Subsidy remain in effect.

It is also clear that freight bound for Newfoundland from Labrador West by surface transportation would be trucked to Happy Valley/Goose Bay and shipped by CN Marine, rather than be transported through the Maritimes.

The cost of trucking general freight between Labrador City and Happy Valley/Goose Bay on the tote road is estimated to be approximately $66.00/ton over the proposed route and $80.00/ton over the alternate route[49], assuming no return haulage.

While trucking will not replace CN Marine on a cost basis as long as the latter remains heavily subsidized, it will be a competitor with an all-weather road in terms of providing a year round, reliable supply of goods and possibly in terms of the quality of goods delivered. It would also mean less storage and inventory costs to the businessman. The extent to which this will result in transfer from marine to road transport will depend upon many factors which cannot be predicted at the present time. With lessened CN Marine subsidies and an all-weather road of high geometric standard between Happy Valley/Goose Bay and Baie Comeau, it is assumed that a large percentage of freight would be trucked into the Study Area.

CFL Co. have said they will maintain the Esker Road at least as far as the Gabbro & Lobstick control structures should an all weather tote road follow the proposed route. If this is so, cabin owners on the Esker Road should not be negatively impacted. However, the Lobstick Lodge will lose business due to through traffic switching to the shorter route. In addition, increased access to the Lac Joseph Caribou Herd during the Fall and Winter hunting seasons and to waterfowl would result.

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[49]Estimate provided by Woodwards Trucking Services, Happy Valley/Goose Bay

5.3 Conclusions

It is a difficult task to predict the future from currently available information but there are several general conclusions which can be stated about the probable impact which the tote road will have on the Study Area.

(i) The primary impacts of the tote road will be social, not economic. Information presented in Chapters 3 and 4 on the current cost and pattern of freight and passenger movement in the area and likely cost savings generated by the tote road show that a summer tote road will result in minimal cost saving to businesses and residents.

The cost-benefit ratio for the tote road as presented in the ADI report (1984) was, 1/1, i.e., the benefits equal the cost. This figure includes a value for de-isolation. No cost-benefit analysis, based solely on economic terms, could justify building this road. The main benefits associated with the road will be social and such impacts are not easily quantifiable. The road may lessen the feeling of isolation experienced by many Labradorians, make it easier to travel within Labrador and stimulate inter-community travel. In addition, however, there will be some new business opportunities created by the tote road, both during and after construction.

(ii) Exactly how expected benefits and costs are weighed depends on who is doing the weighing. The Innu/white difference in viewpoint is an extreme one. However, as a general statement, the road will tend to benefit the elite, i.e. the businessmen, while the weak will tend to become weaker, i.e. the Innu.

(iii) Many of the impacts identified with the tote road are based on the perceptions people have of the future and may bear little resemblance to reality. The vision of Labrador presented in the introduction to this report (Noah, 1974) is unlikely to material-

ize. The road will not of itself lead to the growth of towns and resource based development. There is little if any relationship between future large scale resource development in Labrador and the provision of a road link through the area. Such developments in mining, HEP generation and forestry are more dependent on finance and markets and would go ahead regardless of whether the road was there or not.

With this in mind, it is highly probable that the benefits of the tote road will be much smaller than people anticipate, and Labradorians will be disappointed with the impact of the tote road.

(iv) It may be said that the provision of a direct road link between Labrador West and Churchill Falls will have a positive impact on life in the region. This is borne out by comments expressed by Labradorians throughout the Study and the very low turnout at the public meetings, suggesting that there were few concerns to be raised. The general feeling is that government has delayed long enough and should proceed with building the road as soon as possible. Notwithstanding, however, there are those who feel the tote road will have a negative impact on their way of life. They include members of the Innu community, the owner of the Lobstick Lodge, and those who have raised environmental concerns regarding the project. These concerns are addressed in Chapter 6.

(v) It would seem that of the two routes proposed for the project, the alternate route would generate fewer negative impacts than the proposed one. The use of the proposed route in the long term may result in a loss of business for the Lobstick Lodge, loss of access for cabin owners on the Esker Road and the Michekemau Fisheries (should it re-open), and the possible further depletion of the Lac Joseph Caribou herd. (See Wildlife Component Study). However, the proposed route is likely to generate more positive impacts on business. For example, private trucking costs along

the proposed route between Labrador City and Churchill Falls have been estimated at $30/ton for Freight All Kinds compared to $46/ton along the alternate route.

(vi) The quality of the proposed road will be a significant factor in how much use is made of it. If experience elsewhere in the province is any guide, costs of operation will be high over the unpaved road - both because of high wear and tear and frequency of repairs and because of lower operating speeds. The initial surge in personal travel found on the Burgeo Road will undoubtedly occur on the tote road in Labrador. However, this is likely to diminish as people realize the real costs and time associated with driving it.

With this in mind, it is clear that pressure to upgrade the road will mount very quickly until it is maintained year round and eventually linked to an upgraded road to Happy Valley/Goose Bay and Baie Comeau.

(vii) Impacts associated with the project will be minor in comparison to impacts generated by a road link to Baie Comeau and/or a good quality road link right across Labrador. Impacts associated with each section of a Trans-Labrador Highway will not be accumulative but will change as new possibilities for transportation emerge. As has been said many times before - "the whole is more than the sum of the parts".

(viii) This study per se has discovered no major negative impact associated with either route scenario. This conclusion is based on the premise that CFL Co. will maintain the Esker Road, at least as far as Gabbro, and will carry out winter snow-clearing as at present. If this is the case then the optimum route scenario would be to follow the proposed route. The time and cost savings to the user associated with the proposed rather than the alternate route will probably generate more positive impacts on business and

regional integration than the latter route alternative.

(ix) The major positive impact associated with the opening of the Labrador tote road will be its effect on isolation. This finding has been stated throughout the study and was a common comment from Labradorians interviewed during our research work. The labor strike in 1972 in Labrador West brought the issue of northern isolation to a head. Since that time, this area has seen a reduction in schedule by CP Air, which now only operates one flight a day, six days a week out of Wabush as compared to two daily flights in the seventies.

More recently, the QNS & L Railway has had a hearing before the CTC about dropping its passenger service on the Sept-Isles to Labrador City run. If this were granted, the only option available to residents of Labrador West would be air travel or a long drive on a poor quality gravel road to catch the ferry at HVGB. There is no doubt therefore that a sense of isolation still exists. What has changed is that Labrador City and Wabush have grown with time to be mature communities. There is now a sense of 'belonging'.

With the plans for expansion of the HVGB airport and the intention of DND to establish a NATO Training Base there, there could be growth in HVGB akin to a boom.

In the long term, with an upgraded road from Labrador City to Happy Valley/Goose Bay, there is the potential for a substantial amount of traffic between Labrador East and West. In addition to new opportunities for growth created in Labrador by the road link, it is likely that the image that Labrador presents to the outside investor will be enhanced by the road transportation link. A strong marketing plan for the regional tourist industry combined with a well developed tourist infrastructure could also radically affect the future of the area in the long term.

A summary of impacts put forward in this study is presented in the following table. Where the impact as perceived by residents varies from the consultant's opinion, both perceptions are stated.

SUMMARY OF IMPACTS

During Construction

1. Impact on labor force.

   Comment

   Number of jobs created as per project description.

   Management Strategy.

   Local hiring policy - feasibility dependent on union control over hiring.

2. Business opportunities created.

   Comment

   Need for supplies for road construction and work camps.

   Management Strategy

   Local preference policy - to firms supplying goods and services for road construction and workcamp.

3. Potential environmental damage.

   Comment

   Slight possibility for damage to scenery due to workcamp location.

   Management Strategy

   No clear cutting when putting in workcamp structures. Proper clean-up procedures. Buffer zone to be left between road and camp.

4. Increased vandalism.

Comment

Very slight possibility for vandalism at CFL Co. control structures.

Management Strategy

CFL Co. could increase surveillance at these structures.

Two Years Post Construction

(A) Impacts on the Innu

1. Increase in # of jobs and development opportunities.

Comment - Professional Judgement

Number of jobs and development opportunities small at this stage.

- Perceived Impact

Road will "open up" Labrador; large increase in development opportunities and related employment.

Management Strategy

Government to adopt an affirmative action program re. hiring and offer managerial and financial assistance to Innu entrepreneurs.

2. Potential depletion of the Lac Joseph herd.

Comment

Herd could face extinction through overhunting.

Management Strategy

Wildlife Division should adopt a program to monitor the size and health of the herd.

3. Increase in number of white people in area, which Innu see as a threat.

Comment - Professional Judgement

Potential for substantial increase in number of cabins in the area. Resource base is large enough to withstand pressure at this stage.

- Perceived Impact

Innu perceive road will lead to a vast increase in the number of non-Innu competing for natural resources. They perceive depletion of the traditional resource base.

Management Strategy

Land Management Division should develop a Crown Lands Plan for the area, to assist in decision making re. crown land leases.

(B) Impacts on Business

1. Increased growth opportunities.

Comment

Existing businesses can expand into new markets; new businesses could set up.

Management Strategy

Large industries should be encouraged to buy more goods and services from within the province.

Local firms should be used to supply goods & services for Tote Road construction & maintenance.

Traffic study should be carried out, which may show the need for an all-season road.

2. Loss of business for Lobstick Lodge (proposed route).

Comment - Professional Judgement

Lodge would lose drive-through traffic from Churchill Falls to Labrador City and vice-versa. Sportfishing clientele would not be lost.

- Perceived Impact

Owner of Lobstick Lodge feels a tote road following the proposed route will put him out of business.

Management Strategy

Owner should move to a new location on proposed route if drive-through traffic is essential, or change his marketing strategy.

3. Loss of cabin owners on Esker Road (proposed route).

Comment

If Esker Road is not cleared in winter, some cabin owners may not have access to their properties.

Management Strategy

CFL Co. to be asked to maintain winter clearing as at present. Cabin owners should pay for the service (assuming it has no value to CFL Co.) or use skidoos.

(C) Impacts on Isolation/Travel

1. Positive impact on isolation and the propensity to travel.

Comment

More interaction, between Churchill Falls and Labrador West, especially.

Management Strategy

Choice of proposed route would be optimum in this case as travel time would be minimized.

Traffic survey to be carried out to monitor traffic flow and see if all-season road is warranted.

CHAPTER 6: STRATEGIES FOR MANAGEMENT OF IMPACTS

6.1 Introduction

The primary objective of any environmental impact study must be to assess first of all whether a given project should or should not be permitted to proceed. Given that the decision to build the tote road has already been made, the aim of this component study must be that of assisting the proponent in the decision as to which route the road should follow and in the management of any change which results from it. This management of change involves both the enhancement of positive impacts and the mitigation of negative impacts. A summary of management strategies is presented at the end of Chapter 5. Monitoring of the change incurred by a project is only of use if it can provide information which is of use in future decision-making situations.

Before discussing the management strategy for the Labrador tote road, some general points should be made:

(i) It may not be feasible to prevent negative impacts from occurring. Prevention is the 'ideal' solution but where that is not possible, purposeful monitoring and mitigation strategies are required.

(ii) In some cases, there is little that can be done at the policy level to enhance positive impacts. They are part and parcel of the rationale for a project. In the case of the tote road, for example, little can be done to help businesses expand into new markets. Change in this case, will be self-generating and an individual business in the Study Area will grow and expand as others do and as volumes of sales warrant it.

(iii) Monitoring of impacts is carried out in order to detect change in the baseline condition of a characteristic. It is quite often impossible to attribute such change to the effect of any one

particular factor and so policies to mitigate against such changes are difficult to formulate, especially within the context of decision making within separate governmental jurisdictions. For example, a monitoring mechanism may be put in place to measure changes in crime rates in Sheshatshui. If crime rates increase dramatically in the foreseeable future, there will be no way of knowing whether this change is directly related to the tote road. There are many other developments underway which will effect change in Labrador, eg. Federal Government and NATO proposals for the Happy Valley/Goose Bay area, but it will not be possible to establish direct cause and effect patterns for many of their impacts.

(iv) Some perceived impacts of the project will have both positive and negative dimensions. The increase in tourist travel to and within Labrador is viewed as one of the main positive impacts of the project by many Labradorians. However, this same increase in tourism is perceived as a negative impact by some of the Innu who feel it will mean depletion of resources and disruption of their traditional way of life. Management strategies must address both positive and negative impacts simultaneously in such situations.

(v) In some situations the only way to prevent negative impacts is to severely limit other developments associated with the project. For example, in order to satisfy the concerns of some of the Innu regarding the perceived negative impacts of the proposed road, the only acceptable mitigative measure would be the total restriction of recreational and commercial use along the road corridor.

(vi) Monitoring in some cases can be used to provide baseline data which is not currently available. For example, there is at present no accurate data available on traffic flow on the existing Esker Road. Should a traffic origin/destination study be put in

place upon completion of the road, it would form the 'baseline condition' and could be used, for example, as evidence for upgrading the road or keeping the road open on a year round basis.

Each of the main impact areas are now discussed in terms of appropriate management strategies.

6.2 Impacts on the Innu

6.2.1 Enhancement Strategies

(i) Government should take steps to adopt an affirmative action program to hire natives and other locals where possible on construction and other developments related to the road. Union policy re hiring practices would, however, have to be adhered to.

(ii) In order to enhance any positive impacts that might accrue to the Innu as a result of the project, it is suggested that the alternate route be followed. This would minimize the potential for depletion of the Lac Joseph Caribou herd and other environmental damage and mean that road access to the Michekemau fishery would be maintained. It would also represent less of an intrusion into lands traditionally used by the Innu people.

6.2.2. Monitoring and Mitigation

No mitigation strategy proposed in the current context will answer the concerns of the Innu people. Given that the road will be built, the only strategies which would lessen the perceived impact on the Innu would be those which would prohibit any form of development or use of resources along that road. This would mean a ban on cabin development, fish camps, gas stations and no hunting, fishing or trapping in the area by tourists and residents. However, this type of mitigative approach would mean that some of the positive

benefits of the tote road could not be realized, eg, long-term tourism-related developments, fish camps, a motel, and hunting and trapping by residents and tourists. Having said this, the following strategies are suggested:

(i) Monitoring programs should be adopted by the Wildlife Division to detect any change in the size of the Lac Joseph Caribou herd. Any decrease in current size would warrant appropriate management strategies (See Wildlife Study).

(ii) An adequate number of wildlife officers should be available to enforce existing and new regulations, if necessary.

(iii) A cottage development scheme should be undertaken for the tote road. This would include monitoring of cabin development and the granting of crown land leases within the framework of such a plan. This approach to planning of cottage development in the province is currently being taken by the Lands Branch of the Department of Forest Resources and Lands.

(iv) Given the scale of the tote road project in comparison to other large projects, eg, the NATO proposal to bring in the vicinity of 1500 service personnel to the Happy Valley/Goose Bay area, it is unlikely that increases in crime and alcoholism will result among the Innu as a direct result of road construction. No monitoring/mitigation is therefore required.

6.3 Impacts on Business

6.3.1 Enhancement Strategies

As has been stated above, there is little that can be done to enhance the positive impacts which the tote road may have on business in Labrador. However, the following strategies are suggested:

(i) The Department of Development could set up a Business Awareness or Promotion Program to encourage businesses throughout the region to take advantage of increased growth opportunities created by the new direct transportation link.

(ii) Large industries such as IOCC, Wabush Mines and CFL Co. could be encouraged to buy more of their necessary goods and services from within the province.

(iii) Local firms should be used, where possible, for the supply of materials for road construction and maintenance.

(iv) A traffic study should be undertaken on the tote road within two years of its opening. This type of monitoring would include an assessment of potential increased use due to likely business expansions resulting from an all weather road and a cost-benefit analysis of the same. The results of such a study may show the need for upgrading the tote road and keeping it open on a year round basis. It is probable that some of the positive impacts of the road on business will not be generated until the road is maintained on this basis.

6.3.2 Monitoring and Mitigation

The provision of a direct road link between Labrador City and Churchill Falls will not, of itself, result in any negative impacts on business. However, the choice of a route for this road and future maintenance plans for the Esker Road could negatively impact both the Lobstick Lodge and the Michekemau, Fisheries. Should the alternate route be followed, there will be no negative impact on these businesses and no need for mitigation.

If the proposed route for the tote road is followed, there will be a loss of business for the owner of the Lobstick Lodge. Should this route be maintained on a year round basis then it is likely that CFL Co. will reduce winter

clearing on the Esker Road. If this happens, then there will be no guaranteed road access to the Lobstick Lodge or to cabins on the Esker Road during this time of year.

With this in mind, the alternate route would be the optimum one to follow. However, if the proposed route is chosen it is suggested that:

(i) The owner of the Lobstick Lodge move his trailers to a suitable location on the proposed route.

(ii) CFL Co. be asked to maintain winter clearing of the Esker Road as at present in order that cabin owners can get to their cabins all year round. Cabin owners would be required to pay for this service or else use skidoos to get to their properties.

6.4 Impacts on Regional Integration and the Propensity to Travel

Our survey of the impacts of the tote road on regional integration and the propensity to travel has yielded few results that have any implication for future decision-making.

6.4.1 Enhancement Strategies

(i) As in the case of impacts on business, it is suggested that a monitoring program be established to find out if people do actually use the road once it is completed. If numbers warrant, this would again provide support for keeping the road open on an annual basis.

(ii) Upgrading of the Churchill River Road will have high priority. This would enable Labrador East residents to take advantage of the tote road as a means of travelling to Labrador West and points beyond. In addition, more Labrador West residents would find it feasible to drive to Happy Valley/Goose Bay to use the CN ferry

service.

(iii) The travel time for a return trip from Labrador West to Churchill Falls would be almost 2 hours less via the proposed route as opposed to the alternate. This has obvious cost considerations for the user in terms of gasoline consumption and vehicle maintenance. From the point of view of travel time and de-isolation, the proposed route would be the optimum choice.

6.4.2 Mitigation

It is possible that in the long term the establishment of a Trans-Labrador Highway may mean a reduction in northern benefits now in force, or in the subsidy provided to CN Marine. With changes in travel patterns, the airlines may also find it necessary to reduce air service to Churchill Falls, for example. Such impacts are a consequence of improved road access into the area and must be accepted as such. No mitigative measures are recommended in this instance.

APPENDICES

APPENDIX A: THE SCOPING STUDY

The results of this study were written up as completed and as such the requirements for future research are written in the future tense. This research forms the bulk of the impact assessment work and is presented in the main body of this report.

A.1 Study Objectives

The scoping exercise employed in the Socio-economic component of the Tote Road EIS had three primary objectives:

. To identify and isolate key concerns as expressed by residents of the area;
. To identify similarities and differences in concerns or perceived impacts between different areas and groups; and
. To initiate public involvement in the impact assessment process.

A.2 Methodology

The study involved face-to-face interviews with 61 key informants in Labrador East, West and Central. This included the communities of Labrador City, Wabush (in the West), Churchill Falls (in the Central Area), Happy Valley Goose Bay, North West River, Sheshatshui and Mud Lake (in the East).

The number of interviews by area are listed below:

. Labrador West 22
. Churchill Falls 9
. Labrador East 30

In selecting the group of people to be interviewed, the Study Team paid careful attention to choosing individuals who would be knowledgeable about the area, represent a good cross-section of the community and be able to contribute significantly to a discussion of impacts. (The individuals were selected subjectively by the Study Team). Those selected represent a diverse group of organizations, affiliations and community groups. In addition we have interviewed 11 people who attended the public information session held in the area and who were recommended by other key informants. A complete list of them and their affiliation is given at the end of this section.

Individuals were contacted first by a letter explaining the purpose of the study and the contribution they might make to it. A follow-up phone call from a member of the Study Team was used to schedule the interview. The bulk of the interview work was done in March, 1985. Due to logistical problems caused by climate and geography the Churchill Falls interviews were done in April and the additional eleven interviews resulting from the public information sessions were carried out in May.

The interviewers selected for this scoping exercise were chosen on the basis of:

- interviewing experience
- familiarity with the area.

They were thoroughly briefed prior to going into the field and provided with a copy of instructions (see end of section).

Of primary importance was the need to avoid bias in predisposing the individual to particular issues. The interviewer was instructed not to prompt the individual during the interview by suggesting possible impacts the road might have. The only prompting permitted was to focus discussion as to:

- the level of impact ie, self/family,business/organization, community or region, and
- the significance of impact.

This attempt to minimize bias is seen as of critical importance in that the scoping exercise was to reflect the true concerns of area residents and not those the interviewer thought might be important. (Impacts not necessarily elicited by the scoping exercise but felt worthy of consideration by the Study Team have been identified in drawing up the Relevancy Tree, Appendix B).

As a general comment on the response to the survey, it was evident that almost everyone interviewed was most interested in talking about the project and welcomed the opportunity to voice their concerns and opinions. There was, however, reluctance by some members of the Innu community to participate. This was understood to be for political reasons rather than any disinterest in the project.

A.3 Tabulation of Results

This section provides the results of the Scoping Interviews. It is based on 22 interviews in Labrador West, 30 in Labrador East and 9 in Churchill Falls.

Although the results are presented in tabular form no tests of statistical analysis have been performed on them and they were not intended for that. The tabular presentation was seen as the best method of categorization of a vast array of comments elicited from the interviews and enabled the study team to determine, in a general way, what the main issues or concerns were.

A.3.1 Route Alternatives

A summary of comments about route alternatives is given in Table 1.

Table 1. Route Alternatives

Issues/Concerns	West	East	Central
Prefer direct route	3	6	1
Alternative route	1	8	8
Why only seasonal road?	1	7	
Little demand and no need for the road.		1	
Better to upgrade the Churchill Falls to Happy Valley/Goose Bay Road			2

Several respondents had comments about either the proposed or alternative routes. Three from Labrador East and 6 from Labrador West said they preferred the direct route, principally because it would mean less driving time and maintenance costs. In addition, two people in Labrador West indicated that they would prefer the direct route unless it meant delays in the project,in which case they would prefer the alternative.

One organization in Labrador West supported the alternative route - in support of the Lobstick Lodge manager. As to the need for a road, one respondent felt there is little demand and no need for it; whereas others questioned why only a seasonal road was proposed and felt that an all weather road was required.

The links between Churchill Falls and Labrador East appear to be stronger than to the west. This was indicated by the two people commenting that it would be preferable to upgrade the road to Happy Valley/Goose Bay than build the Tote Road and by comments made by other contacts. One person said he preferred the alternate route because it would be completed much quicker than the proposed route.

Seventeen comments were made in support of the alternate route. They indicated concerns about business, the Innu, cabin owners and the people of Schefferville. There was also concern about environmental impact (see Environmental Concerns section). The point was also made that the Esker Road is of good quality and that the cost of upgrading that portion of the road should not be included in estimates of the cost of the project as they felt it was a Class A road at present.

Several cabin owners from Churchill Falls were interviewed and one of these was very concerned as to how he would get to his cabin in winter if the proposed route was chosen. His cabin is located on the Esker Road which is currently maintained year round by CFL Co. He raised the question of compensation for loss of use of his cabin and wondered if the government would pay him $20,000 to relocate it on the proposed route.

Comments from our interviewer in Churchill Falls supported the fact that Churchill Falls is much more closely linked to Labrador East than Labrador West. Although CFL Co. brings in most of its freight by the Esker Road, the bulk of personal travel is via EPA or by road to Goose Bay and out on the CN Ferry. The high standard of living afforded by company salaries means that many people can afford to fly in and out and are not dependent on road transport.

A.3.2 Impacts upon Person/Family

Several respondents felt that the road would have direct impact upon themselves and their families (see Table 2.).

Table 2. Impacts Upon Person/Family

Issues/Concerns	West	East	Central
Leisure use	8	5	1
Employment	7	5	
No impact	2		2
Services improvement	4		1
Accidents		1	

The point was made that the relatively high salaries in Churchill Falls mean that people would not be as dependent on road transportation as those in other communities. However one respondent felt that the road would give him an alternative route for going on holidays via Labrador West rather than Labrador East.

Fourteen respondents indicated that it would affect leisure activities such as camping, fishing, and general leisure time travel.

Twelve respondents referred to employment benefits from the road. One person commented that it would result in a better feeling of stability (for example: because of increased job opportunity).

Four respondents in Labrador West and one in Churchill Falls felt the road would improve services in the area, for example, by providing somewhere else to shop and possibly a reduction in air fares.

An increase in road accidents was a negative impact expected by one respondent.

A.3.3 Regional Integration

Issues related to integration of Labrador and the Province were offered by a cross-section of respondents.

These are placed into categories in Table 3.

Table 3. Regional Integration

Issues/Concerns	West	East	Central
Better/cheaper access within Labrador and the Province	16	3	1
Stronger links within Labrador	7	7	2
Opportunity for exchange visits	12	6	2
De-isolation	9	4	2
No impact if only a summer road		1	1

The issue of having more convenient and cheaper access was emphasized mostly in Labrador West, where people place high emphasis on travelling to Labrador East and more particularly to Newfoundland, from where a large percentage of the population originated.

There was strong representation from both Labrador West and East respondents on promoting stronger links within Labrador and eliminating the "sub regional" phenomenon. One respondent stated that the road would promote broader awareness and understanding among cultural and ethnic groups.

Another well articulated impact expected from the tote road was the opportunities for exchange visits within Labrador which are currently beyond the financial reach of many organizations. Groups expected to take advantage of these opportunities include women's groups, sports teams, service clubs and students. In Churchill Falls, CFL Co. presently spends a lot of time and money flying sports teams in and out of the community. It was felt that the opening of a road link to Labrador West would be a considerable saving to them in this respect.

De-isolation was also expressed as a positive result of the road. Some felt further that people wouldn't need to use the facility to feel less isolated. In Labrador West , eight respondents felt that it would be important in areas such as depression and alcohol consumption. One person interviewed felt isolation not to be a major issue. Several others stated that the feeling of isolation would only be lessened if the road was maintained on a year round basis.

One respondent in Labrador West said it wouldn't be worth his while to use the road to exit via Goose Bay because IOCC presently gives its employees a $4000/year travel bonus so they can afford to fly in and out. Should this company bonus be dropped he thought the road would be an advantage.

A.3.4 Community-Wide Impacts

Issues and concerns expressed in all sections of this report have implications for the community at large. This section deals exclusively with community matters which do not fit into other categories. Table 4 outlines five areas of impact.

Table 4. Community Impacts

Issues/Concerns	West	East	Central
More family visiting	4	6	2
Strengthen tax base	1		
Negative social impact	1	3	1
No negative impact		2	
Important to have public hearings		2	
Change in services			3
Change in social status			1

Comments about negative impact came from either general apprehension or specific concerns such as "the community will lose its close-unit feeling."

Two people in Labrador East felt that there would not be any negative social impact as the area had already dealt with major industrial and social change.

Two others felt it important to have public hearings in their community so that the project could be exposed to a much wider public scrutiny.

The most frequently cited impact was the effect that the road would have on increasing the possibility of visiting friends and family. Two cabin owners from Churchill Falls felt that if the alternative roue was chosen they would get friends visiting them at their cabins along the Esker Road. This was seen as a positive impact.

Two respondents from Churchill Falls felt that the road could stimulate more consumer and social services than currently exist. A third was concerned about changes (i.e.lessening) in air services to the town.

One respondent from Churchill Falls felt that the project could begin a change in the town's status as a company town, which could result in its becoming a municipality.

A.3.5 Development Opportunities

Most respondents had definite ideas about what the road could do to the development of their community region. Their comments are summarized in Table

5.

Table 5. Development Opportunities

Issues/Concerns	West	East	Central
Quebec link- more important than Tote Road.	6	6	1
Tourism opportunities	37	24	3
Resource Development	14	9	
Important to opening up the area		4	
Not convinced on importance.		12	2
Could reduce employment		1	

Thirteen people emphasized that they felt the Tote Road would have minimal impact compared with the link to Quebec. Many of their subsequent comments were based on this contention.

All respondents mentioned tourism as an area of huge potential which the road could help develop. Two people stated that little potential would be realized from a summer road. Expected areas of opportunity included skiing, wilderness/adventure tours and highway service uses. Sales of locally produced crafts would increase and the road would mean cheaper wholesaling of craft products.

One felt that the resident market would be high initially but would not result in much tourism trade in the long term. Another felt that smart marketing could develop the non-resident market in the long term.

It was felt that the road could provide access to or make feasible resource development activities such as mineral exploration, hydro development and small scale lumbering.

Four respondents felt that it would be important in opening up the area in general. Eleven others (in Labrador East) and two in Churchill Falls had doubts about the Tote Road, especially as long as it remained a summer road and until the Churchill Falls Road is upgraded to standard.

One respondent in Labrador East felt that the road could reduce employment opportunities, for example, by eliminating jobs in warehousing and shipping.

A.3.6 Business Operation

There was a good representation of opinion on how the road could affect the operation of businesses and the creation of new or expanded business opportunities. Table 6 provides a summary of these comments.

Table 6. Effects on Business

Issues/Concerns	West	East	Central
More attractive for employees	1	1	
More attractive for new business	1	1	1
Commodity flows	20	11	2
Use all- weather road only		5	
Make business more competitive	3	6	
Supply of goods to road construction	1		
New trucking business		1	
Tourism would give business a boost		2	
No need to carry large inventories		1	
Operation of utility			4

One respondent in both Labrador East and West felt that the road would increase the chances of holding on to employees for longer than present.

Twenty-six comments were made concerning the storage and distribution of goods and services. For example, there were six comments in Labrador West to the effect that the competitive position of Newfoundland companies to supply goods and services would be improved. People in both Labrador East and West saw their areas acting as a storage and distribution center for the other. Two people in Labrador East saw the future of transportation subsidies (principally to CN Marine) as important. Labrador East respondents saw being able to receive cheaper goods (mainly building supplies and foodstuffs) as an effect. Four respondents in Labrador West saw Happy Valley/Goose Bay being supplied with fresh produce through their area in the Fall with a supply of fresh seafood travelling in the other direction.

Five respondents in Labrador East saw their operation benefitting only if it was an all-weather road.

Nine respondents felt that the road would make business more competitive, eg: by supplying less expensive goods and providing for more interchange between entrepreneurs.

In addition there were comments as to the new business that might be stimulated by the Tote Road. These include trucking, warehousing, gas stations and tourist accommodation. One respondent in Goose Bay said that a Trans-Labrador road link would reduce his need to carry a large inventory of stock as it would mean more reliable delivery of goods.

Representatives of CFL Co. felt that the project could assist them in servicing of transmission lines and their Wabush Terminal Station. Concerns

were expressed about the Ossakmanuan crossing and the need to increase security (preferred route). If the road were open year round the company might relocate its siding to Ross Bay Junction. Another concern revolved around the impact of increased traffic on the company's structure along the Alternative Route, eg. at Gabbro.

A.3.7 Innu Cultural Concerns

Concerns of the Innu people are summarized in Table 7.

Table 7. Innu Cultural Concerns

Issues/Concerns	West	East	Central
Land claims should be settled prior to development	1	1	
Concerned about other developments which the road could cause*		2	
Could restrict lifestyle (eg, tighter wildlife regs.) & heighten racial tensions		3	
Increased exposure to white culture		3	
Increased social problems		1	
Elders, particularly, unable to adapt to change		1	
Imperative to hold public meetings		3	

*specific concerns were not indicated

A high level of largely negative concern was expressed about the impact the project would have on the Innu people. One respondent saw it in part as providing business opportunities, particularly for a commercial fishery at Lobstick Lake (alternate route). However, there were a variety of concerns expressed about erosion of the Innu culture which are listed in the Table above.

A.3.8 Environment/Resource Management

Table 8 summarizes the concerns expressed about the environment.

Table 8. Environmental Concerns

Concerns	West	East	Central
General	1	6	2
Should not prejudice Wilderness Area plans (eg, Lac St. Joseph)		2	
Illegal hunting/fishing increase		1	1
Need rationalized policies for long-term resource utilization prior to building road		1	
More opportunities for hunting/fishing	1	1	1
Parks and wilderness areas should be set aside		1	1

Opinions about the environmental consequences of the project were all negative in nature except two, where the road was seen as an access point to new trapping areas. One respondent from Labrador East felt that the tote road could provide residents of Labrador East with much easier and cheaper access to caribou than they presently have (George River Herd). This could lead to both a subsistence hunt and a commercial hunt in the neighborhood of the tote road.

Nine general concerns were expressed by people who were generally worried about the environment, without mentioning anything specific. Comments ranged from damage to the environment due to construction, and to opening up of a wilderness area. Several respondents felt that the alternate route would be better in this regard as it already served as a transportation corridor and increased environmental damage would be minimal. The need for long term land and resource use planning was brought up with regard to the road and this included the need to control illegal hunting and fishing and the need to set aside areas for parks and wilderness areas in order to best preserve the natural environment.

A.3.9 Tote Road - Long Term Development Strategy

Four respondents saw the road as the first step towards major change in Labrador (and that this EIS should be treating it as such). A third respondent felt strongly that the Tote Road should not be considered in isolation from the broader picture of an expanded all-weather corridor and several stated that the link to Baie Comeau was more important. Respondents in both Labrador West and East predicted that there will be a great demand to upgrade the road to all-weather standard.

A.3.10 Ranking of Impacts

Interviewers were asked to rate issues and concerns, in consultation with respondents, as being of High, Medium or Low importance. As such, there is

difficulty in comparing responses between individuals. However, this ranking does give the study team some indication of what the most important impacts are and the direction which future research should take.

Their value in terms of any quantitative analysis is therefore limited. The results may however have some value in giving an appreciation of the intensity with which respondents put forward their feelings.

With the above in mind, there are some issues and concerns which clearly stand out in importance in Table 9.

Table 9.- Levels of Concern

Issue/Concern	High	Medium	Low
1. Route Alternatives			
. Prefer direct route	2	8	
. Prefer Alternate route	8	7	
. Why only a seasonal road	8		
. No need for a road	1		
. Upgrade Churchill Falls/ to HVGB Road		2	
2. Impacts on Person/Family			
. Leisure use	6	7	1
. Employment	6	4	
. No impact		2	2
. Services improvement	2	3	1
. Accidents		1	
3. Regional Integration			
. Better/cheaper access within Labrador and the Province	10	9	1
. Stronger links within Labrador	7	8	2
. Opportunity for exchange visits	10	10	
. De-isolation	11	4	1
. No benefit if summer road only		2	
4. Community Impacts			
. More family visiting	9	3	
. Strengthen tax base	1		
. Negative social impact	2	2	1
. No negative impact			2
. Important to have public hearings.	2		
. Change in services		3	
. Change in social status		1	

5. Development Opportunities			
. Quebec link more important than Tote Road	12	1	
. Tourism opportunities	50	8	3
. Resource development	15	7	1
. Important in opening up the area	1	3	
. Not convinced on importance	7	5	3
. Could reduce employment			1
6. Effects on Business			
. More attractive for employees	1		1
. Commodity flows	22	10	1
. Use all- weather road only	5		
. Make business more competitive	4	4	1
. Supply of goods to road Construction	1		
. New business	3		
. Operation of utility		4	
7. Innu Cultural Concerns			
. Land claims should be settled prior to development	2		
. Concerned about other developments to which the road could lead	2		
. Could restrict lifestyle and heighten racial tensions	3		
. Increased exposure to white culture/deterioration of Innu culture	3		
. Could increase social problems	1		
. Elders, particularly unable to adapt to change	1		
. Imperative that public hearing be held	3		
8. Environmental Concerns			
. General concerns	3	5	1
. Should not prejudice wilderness area plans		2	
. Increase in illegal hunting/ fishing		2	
. Need nationalized policies for long term resource	1		
. More opportunities for hunting and fishing	1	2	
. Need to set aside park areas and wilderness areas	1		

All Innu-cultural concerns are given a High ranking. Development opportunities, particularly tourism and resource development are clearly high on the priority list. Within the Effect on Business category, issues revolving around commodity flows are very prevalent.

The number of High, Medium or Low concerns raised about the doubtful value of the seasonal Tote Road in isolation is significant. Some of these show up in Table 9 under 1.- " Why Only a Seasonal Road "; 5.- " Quebec Link More Important Than Tote Road" and 6.- "Use All-Weather Road Only". Others are contained within categories such as 6.- Commodity Flows.

The number of High or Medium concerns within 3.- Regional Integration is also significant, indicating strong priorities in that area.

A.4 Summary of Scoping Study Findings

The overall conclusion resulting from the scoping work is that the project is viewed as being badly needed by most Labradorians of European extraction in both Labrador East and West. Many see it as essential to the region, community and to them personally. Another clearly held position is that the Tote Road by itself is unlikely to have major impact unless viewed as the beginning of a larger facility (for example: an all-weather road connecting East and West Labrador. Another common opinion held by both East and West respondents is that the transportation link to Baie Comeau is far more important than the intra-Labrador link.

Those who have reservations about the project have a variety of concerns; some of which are environmental, some related to its feasibility and its impact upon the region in the long term.

People interviewed from the Innu culture have very strong reservations about the project. They see it as representing further invasion and erosion of their culture.

The project, particularly the proposed route, would open up new areas for resource harvesting and use, which the Innu respondents see as a constraint rather than an opportunity. They have reservations about whether the community (particularly the elders) could adapt to the change the project might bring, and in fact whether they wish to change.

Much enthusiasm was expressed by most respondents about the development opportunities which the road could provide, or act as a catalyst for. They see it as facilitating much activity in the resource development and tourism sectors particularly. Another large group responded that the project could have substantial impacts upon the operation and competitive position of the business sector.

Most respondents also clearly feel that the road would give a gigantic boost towards integration of the "sub-regions" within the Study area into one major region. It would promote stronger links between east and west and with Newfoundland. Isolation would be lessened and various interchanges would occur

at the social, cultural and economic levels. As a counter-balance, there were a few concerns expressed about matters such as an increased accident rate, reduction of the community's close -knit feeling and concern about the social costs of development in general.

APPENDIX B KEY IMPACT AREAS

The results of the relevance tree procedure were written up as completed and as such the requirements for future research are written in the future tense.

The relevance tree procedure has commonly been used in social impact assessment studies as a checklist in the identification of key impacts (Finsterbush, K. and Wolf, C.P., 1981). Such a checklist is necessary to ensure (i) that no potential impacts are overlooked, and to (ii) determine which variables baseline or profiling information is required for. In this present study the relevance tree procedure has been used in conjunction with the scoping study as it was felt that the use of one method alone for the identification of potential impacts may have resulted in some key variables being overlooked.

The relevance tree outlined in Table 1, a, b, and c lists a variety of factors at various scales of analysis which are considered 'relevant' to the present study. This final list of relevant factors involved input from the scoping study, the literature review and the Study Team.

The finalized relevance tree to be used in the assessment of socio-economic impacts resulting from the Labrador tote road is shown in Table 1. Each factor is then discussed in terms of the reasons for its inclusion in the impact statement, the unit of measurement, research instrument to be used and level of significance. Conclusions are supported by evidence from the literature where possible. The order of discussion of the factors follows the sequence in which they occur on the relevance tree.

A brief account is also made of those factors which were considered and dismissed as irrelevant. We have taken into account all four project scenarios when identifying potential impacts but have given more weight to the first scenario, i.e., gravel road with summer maintenance only.

a. Households

Demographics

In assessing the potential impact of the project on population levels and structure our review of the literature has shown that highway construction projects can often cause large influxes of population to a region during the construction period - often with detrimental impacts on the local population. For example, during the construction of the Shakwak Highway in the Yukon the labour force associated with the project peaked at 1000 in 1984 causing a doubling of population in the highway corridor. This put considerable strain on social and medical services in the communities affected and was probably the major cause of negative social impacts associated with the project. Similar situations occured on the Dempster Highway and MacKenzie Valley Pipeline projects.

However, there are two factors which must be taken into account here before

assuming that this will be a major impact area in the Labrador situation. The first of these is the scale of activity and, the second, the nature or stage of development of the area involved. Labour requirements for the Labrador Tote Road are expected to peak at 90 in the first year of construction and decline to 10 in the third year. There is little comparison between these figures and the population figure of 1000 quoted above for the Shakwak Highway Project.

Due to the current economic conditions in Labrador, i.e., high unemployment, and the local preference policy to be employed on the project there is not expected to be any significant immigration of workers associated with the construction of the road. The work will take place on a seasonal basis with the workers (continued after Table 1).

Table 1: Relevance Tree - a. Households

		Consumption	consumer goods (food, fuel and services)
	Economic		propensity to travel
INDIVIDUALS		Production	employment incomes
	Political		cabins/other land uses; wood cutting,hunting/fishing
NUCLEAR FAMILY			
		Physical/ Psychological	reduced isolation/ reduced depression/ improved well being crime hazards
	Social		
		Education	teacher workshops
OTHER HOUSEHOLDS			
		Social Relations	family and community contacts
	Cultural		native traditions and values

Table 1: Relevance Tree - b. Communities

Settlement	Demographic	in-migration
	Economic	transportation/ communications
		taxes/revenues
COMMUNITIES		
	Social	inter-community activities
Region	Cultural	native traditions/ values
	Environmental	pollution
		access to areas of natural beauty/wilderness
		public parks/recreation areas

Figure 2: Relevance Tree - c. Organisations and Groups

	Economic	resource development
		construction
		commerce
ORGANISATIONS AND GROUPS	Political	agencies/departments
		administrative units/ jurisdiction
	Cultural	native traditions/ values

being accomodated in construction camps as per the project description.

The seasonality of the work, and the availability of local labour leads us to the conclusion that there will be no permanent migration associated with

construction. It is anticipated that existing firms in the area have the capacity to supply the project with services such as vehicle repair, fuel and aggregates, etc., so that migration associated with economic spin-offs will be negligible. The permanent population change associated with the project is therefore expected to be zero.

Having said all this we must take into consideration that our scoping study revealed some of the Innu population perceived this factor as an area of concern for them. They felt that there would undoubtedly be more white people in the area taking jobs that could go to the Innu and competing with them for hunting and fishing resources. This concern will be addressed during our research into Innu concerns and also in the tourism study when it deals with future levels of tourists using the area as a result of the tote road.

Permanent Housing, Utilities and Infrastructure

The factors above are all "demographically dependent" in that expansion of the existing housing stock, utilities or infrastructure in a community is necessitated by an increase in the population level in that community. The foregoing discussion on demography has concluded that permanent population change associated with the tote road will be negligible. In any event, as our profiling data shows, there is adequate housing, etc., in the communities to accomodate any increase in population which might occur. Indeed housing vacancy rates in Labrador West and East are such that the project would have beneficial effects in reducing vacancy rates and stabilizing housing prices, should such a population increase occur.[1]

Consumer Goods (Food, clothing, fuel and services).

A review of the impact statement on the Burgeo Road and a knowledge of problems associated with supplying goods to Labrador has shown that this is one factor which must be considered as a probable impact area in the Labrador tote road situation. Currently, Wabush and Labrador City are supplied with consumer goods via the QNSLR or to a lesser extent by air from Quebec or Newfoundland. C.F.L.C.O. trucks in all its goods from Labrador West via the Esker Road. Labrador East relies on CN Marine and to a lesser extent Eastern Provincial for goods from Newfoundland. The opening of the Ross Bay Junction to Churchill Falls Tote Road will open up the opportunity for the establishment of very different supply patterns and a possible change in the cost of obtaining these goods. In the longterm the opening of an all year TransLabrador Highway may go far to ensure year round supply of goods to coastal Labrador via Labrador West.

A direct truck link to Labrador City could mean reduced costs in Churchill Falls especially for food and, if the road is open in winter too, will lead to

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[1]This material will be documented in the Profiling section.

an increase in reliability of supply.

The change in routing and means of transportation may lead to an increase or decrease in the demand for warehousing in certain centres within the study area, notably at transhipment points such as Labrador City and Goose Bay and it may be that Labrador City will perform an increasing share of the warehousing function at present done in Goose Bay.

On the demand side the opening of the road provides the opportunity for consumers to travel further afield to purchase food, clothing and other consumer durables. Currently many people living in Labrador West especially make many of their major purchases outside the area during holiday periods. In the long-term the establishment of an all year trans-Labrador highway may open the opportunity for new businesses to establish in the area to tap some of the dollars now spent on the island or out of province. In the short term the Ross Bay Junction - Churchill Falls tote road offers the opportunity for people in the affected communities to travel to Labrador City, Wabush, Fermont or Churchill Falls to make purchases of food, clothing and consumer durables. This potential for comparison shopping may in itself be a regulator of prices for certain items within the study area although it is doubtful whether people would travel such distances for purchases such as food.

Our research into the impacts of the tote road will involve a comprehensive examination of how each of the four scenarios might affect the patterns and costs of the supply and demand for consumer goods.

The instruments used to obtain the necessary data on this topic will include a questionnaire to local businesses to assess current costs, problems and patterns in the supply/demand of such goods and predict any changes in the above which could be related to the opening of the tote road. We will be using the 1984 Business Inventory for Labrador from which to select a stratified sample. In addition to this questionnaire consultation with the major carriers in the area will also help to assess the current flows and costs associated with the movement of freight in the area. (This is discussed in more detail under Transportation.)

In terms of the unit of measurement to be used to assess impacts, we expect some of this data to be qualitative, others quantitative. As an example, problems associated with seasonality of supply might be qualitative while current and future shipping costs will be quantitative.

The level of significance would be determined on the basis of attitude ranking, from opinions expressed by business people. In addition if commodity flows change to the extent that seasonal trucking of goods between east and west becomes feasible, and goods are cheaper/or better quality/variety as a result, then there would be a significant impact; if not, then insignificant.

Propensity to Travel

It would not take an exhaustive review of the literature to show that the

opening of a major highway increases the propensity to travel for people living within easy access to it. Surveys done on the Burgeo Road have shown that travel from the affected settlements and especially Burgeo increased up to five fold with the opening of that road. This initial surge in travelling did level off however, after a year or so when people began to realize the real costs associated with using the road.

In order to assess the propensity to travel under the various scenarios we shall be using a short questionnaire to be administered to residents of Labrador West, Labrador East and Churchill Falls - probably in a shopping mall type situation. The aim of the questionnaire will be to determine current and expected travel habits. The questionnaire will attempt to describe the current travel habits in terms of frequency, purpose and destination, estimated cost, and how these habits might change with the opening of the tote road.

In terms of assessing the level of significance associated with this type of factor we shall be basing our assessment on a % increase or decrease in the amount of travel to and from
different locations; the establishment of new travel patterns and new reasons for travelling; and, if possible, on costs associated with travelling the tote road.

Employment

According to the project description there will be temporary jobs associated with the construction of the Tote Road, and permanent jobs associated with its maintenance. These comprise the direct, project-related jobs. In order to assess the number of indirect jobs associated with the project in the short term we shall be using empirically derived multiplier valves to come up with an estimate of the number and type of jobs that might result from the construction of the Tote Road.

In the long term the number of jobs that can be related to the opening of the Tote Road will, in large part, depend on the number of development opportunities which result. We shall be obtaining this informtion from senior personnel in resource departments and agencies.

In terms of how significant the road will be in affecting employment level/ opportunities we shall relate our findings to current unemployment rates in the area. In the long term any new development opportunity that is created by the road will be treated as significant. The level of significance in this case will be a reflection of the opinions of personnel contacted from whom we obtain this information.

Incomes

In looking at the impact of the road on incomes we shall assess how the project will affect income for the individual and for the region in both the

short and long term. Results will be expressed in dollars. Current wage rates and incomes will be described using data collected from Statistics Canada and Revenue Canada. Income arising from the project will be based on expected employment; we shall use the effects of income multipliers to determine aggregate income resulting from the project.

In assessing the level of significance of the impact on incomes, we shall look at significance to the individual and to the region.

At the individual level this increased income will be compared with current average wages and average UIC and welfare payments. A minor impact on incomes will be one which results in less than a 5 percent change in income level to individuals working on the project. Anything over this level will be considered moderate (5-15% change); or major impact (over 15%).

At the regional or aggregate level significance will be determined by looking at the additional income which comes into the region as a result of the project. Again significance will be determined in terms of a % increase over current aggregate income level.

Cabins/other land uses; woodcutting, hunting/fishing

Our preliminary research into existing cabin development in the study area has shown an abundance of cabins on the Churchill-Esker Road and in the vicinity of Wabush/Labrador City. There is every reason to expect that this type of development would be given additional impetus with the opening of the tote road, and in particular the preferred route as it will open up large tracts of previously inaccessible country. In fact, applications are already being received for crown land leases in the vicinity of the Ross Bay Junction Road. Woodcutting, hunting and fishing are in most cases activities which are carried out from these cabins or from fishcamps and/or private trailers in the area. In order to assess the impact of the road on these activities we shall be consulting with key individuals in the area to assess the level of such activities and any existing and possible future problems there may be with and without the tote road. Consultation will also take place with resource managers and users about woodcutting, hunting and fishing.

The thrust of our research in this area will be to assess the current situation with respect to cabin development, provincial parks, hunting, fishing and woodcutting and predict what the impact of the tote road will be upon them. In all of this investigation it will be necessary to look at the regulations and controls governing these types of activities and assess whether changes in them will be necessary to mitigate the impacts of the project. This will be achieved through consultation with key resource use regulators.

In assessing the significance of the impacts on this factor, any increase in activity which leads to the need for changes in controls or regulations will be considered significant. Any potential increase in activity, eg. fishing, hunting which will put a strain on land or other resources will be considered significant. Any need for the development of new parks or recreation areas

will be considered significant.

Reduced Isolation/Reduced Depression/Improved Well Being

According to the Newfoundland Highways Prospective Analysis prepared by A.D.I. in 1984, one of the major objectives of the Labrador tote road is to reduce the isolation of the area and in particularly the Labrador City, Wabush area. It has been found that the isolation of the area has been a factor affecting the willingness of workers to locate in Labrador. This is because their ability to travel to and from Newfoundland to visit friends and relatives is severely limited due to distance and cost. The Labrador tote road, particularly as part of the Trans Labrador Highway, could help reduce the isolation or the perceived isolation of this area.

Our research on these factors will involve the use of a short questionnaire to probe what local area residents feel might be the impact of the Tote Road on these factors. The unit of measurement will depend on the number of people so responding while the level of significance will be subjective and relative - no effect; some effect; great effect.

Crime

Our review of the literature into the impact of major highways on the level and type of crime in the communities affected, has revealed very different results. On the one hand there are situations such as the Burgeo Road where no significant increases in crime rates have occurred and on the other are situations such as The Dempster Highway and Mackenzie Valley Pipeline where crime rates escalated during and post construction of the road. It would seem that the opening of a new highway itself is not the catalyst in causing crime rates to take off but rather the fact that the road brings two very different cultures into close proximity with a resulting clash of values, of traditions, of ways of life, and of incomes. It cannot be said that crime will necessarily follow the construction of a new highway. Each situation must be assessed in terms of the number of in-migrants to the region as a result of the project, the cultural background of these migrants and of the area residents and the disparity which may exist between both groups of people in terms of incomes, traditions and way of life.

There is no reason to expect that increased crime will be an impact of the Labrador tote road. There will be no in-migration to the area as a result of the project; employment levels associated with the road will be small; and the native population of the area has been in contact with "white" civilization for many years and already has crime and other social problems in the winter base at Sheshashiu[2]. However, having dismissed the possibility of crime as an

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[2]Documented in the community profile

impact of the project we must take into account that the Innu perceive this to be a potential impact of the project and in our research into Innu concerns we shall be gathering more information from them on this.

Some concern has also been expressed by CFL Co. as to the possibility of increased vandalism at their structures on both the preferred and alternate routes, and it is probable that an extra person may have to be hired by them in order to patrol these areas.

Hazards

Under this heading are included traffic accidents and vehicles stranded by bad weather. The literature has shown that both these factors can result from construction or upgrading of a highway. Interestingly, on the Burgeo Road, the increase in traffic accidents occurred in the town of Burgeo itself. In order to predict what may happen on the tote road we shall have to rely on accident rates for similar roads,eg, Churchill-Esker Road, the maintenance schedule supplied by project management, and knowledge of local weather conditions. The level of significance of this factor will be determined through discussions with officials from the Department of Transportation and the R.C.M.P.

Occupational Skills/Work Experience

Due to the small number of jobs and the nature of the work associated with construction and maintenance of the tote road, the project is unlikely to have any significant impacts on occupational skills and work experience or demand skills not presently available in the area. Dismissed.

Teacher Workshops

In order to determine whether the tote road would have a significant impact on this factor we shall be requesting information from the Labrador School Boards on the existing situation with respect to teacher workshops and how it might change as a result of the tote road (4 scenarios). Our unit of measurement will be the number of workshops, their location and the number of teachers who would attend. We expect that, due to the distances involved and the small amount of time allocated to workshops, that the significance of this impact will be low. Teacher workshops has been chosen as an example of inter-community exchanges that might result from the tote road.

Family and Community Contacts

Unit of Measurement: Number of people with relations in other parts of Labrador and the Island of Newfoundland. How many times are they likely to

visit if the road is built.

Level of Significance: If the road leads to increase in visits, then it is significant. Level of significance will depend on the number of visits.

Instrument: Shopping mall survey outlined above, to assess current visiting patterns/levels and predict future ones. Our questionnaire will follow in early June.

Religion Dismissed. It was felt that the Labrador tote road would have no affect on this variable.

Native Traditions and Values

Research into this area will include the following:

- literature review
- consultation with key representatives of the Department of Social Services and the RCMP
- additional interviewing of residents in Sheshatshui

The objective of this research is to gain additional insight into the impacts which past developments such as the Esker Road and the North West River Road have had on the Innu. A second objective will be to explore further into perceived impacts revealed by the scoping study.

The consultations with the Department of Social Services and the RCMP are expected to provide profiling information and an assessment of future program requirements. The data requested will include:

Social Services

- social programs currently provided in the community extent of the current welfare payment program
- changes in needs/programs over the past five years
- current/projected needs for programs and services with and without the tote road

RCMP

- current incidence of petty crime in the community
- changes in crime over the past five years
- current/planned rehabilitative programs with and without the tote road

The proposed consultation with the Innu will be an extension of the scoping interviews undertaken in Phase 1. As noted in our progress report, interviews are proprosed to take place in small groups rather than at the individual level, in order to create a relaxed atmosphere and facilitate a free flow of

information. Based on past experience, it has been shown that to take a more formal approach to the interviewing would increase the probability of alienation and discourage honest responses.

Small groups of, eg community elders, young people and women will be interviewed to assess their opinions on potential impacts of the Tote Road on their community and way of life. It will be approached from the perspective of both opportunities (eg, for employment, recreation/subsistence resource needs) and constraints.

The relevant factors pursued in this work will be the projected use of land and resources resulting from the tote road, including:

- country foods/supplies
- cabins
- wood cutting
- hunting
- fishing
- travel/vacations
- parks/recreation areas
- resource extraction uses
- employment/business opportunities

The effects of changes in land and resource use will be described in terms of five areas of concern:

- social malaise
- alienation and displacement
- environmental impact
- aboriginal rights
- Innu participation

The Study Team will draw conclusions on the effects of the tote road based on:

- input from the Innu people
- literature review
- best professional judgement

Factors considered to be significant will be those projected to affect the Innu way of life, including the recreation/subsistence use of resources and employment/business opportunities. Those expected to have little or no impact on the use of resources and employment/business opportunities will be regarded as not significant.

b. Communities

In-migration of workers/families; Age/sex structure

As discussed above it is not expected that any significant level of permanent in-migration will be associated with the project. However, the size and location of the workcamps is a source of concern to the Innu people and to C.F.L.Co. We shall be probing this further in our research on the Innu and shall make full use of the project discription and evidence from similar situations, eg. the Cat Arm project; the Dempster; the Shakwak Highway; to try and assess whether this is likely to pose a problem on this project.

Location of a work camp in the vicinity of Churchill Falls may put a strain on facilities and services available in that community but this is not seen as an impact which requires research but one where mitigative measures should be put in place, i.e., informing CFL Co. exactly how many people will be likely to come into town, and how much extra supplies will be required well in advance of the camp being located there.

Transportation/Communications

The opening of the Labrador Tote Road will establish the first direct road link between Labrador West and Churchill Falls. As such it will offer the possibility for the establishment of new flows of freight and passengers in and out of these communities. In the long term a road link from Labrador City through to Happy Valley/Goose Bay may have a very significant effect on the role which Goose Bay and Labrador City have in supplying goods to the region. In terms of passenger movement, there will now be the possibility of tourists using a "circle route" when visiting Labrador, and the option for residents of western Labrador to drive all the way to Happy Valley/Goose Bay and exit via the C.N. Ferry.

Evidence from other provincial highway studies, notably the Burgeo Road and the Harbour Breton Road, has shown that an expected increase in tourism in those situations did not materialize. The distances involved are still perceived to be too great and in the absence of aggressive marketing plans and limited tourism infrastructure, the roads in themselves have done little to foster the tourism industry. The results of the scoping study show that local people feel the road will have a positive impact on business and tourism and we shall be assessing this perceived impact in the following manner.

In order to describe the current situation with respect to the flow and cost of moving goods and services, we shall be requesting information from the major carriers in the region on both costs of and volumes of freight and passengers coming into and out of Labrador and moving between the study area communities. This will include data from:

QNSLR
EPA
Labrador Airways
CFL Co.
Private Business
Utilities Board (truck rates)

This data will allow us to describe the existing situation. Using data obtained from the Utilities Board and private trucking firms we shall estimate the probable cost of moving freight across Labrador. If this is a considerably cheaper and more reliable method of obtaining goods in Labrador East, Centre or West then it is expected that the tote road would have a significant impact on the flow of goods in Labrador. Our survey of local businesses will also assess whether they are likely to use the tote road for supply or distribution and whether this would result in a saving to them. This survey will also probe such areas as freshness and quality of products received and reliability of supply. If these factors are impacted as a result of the road it will have a significant impact. In undertaking and analyzing this data we shall take into consideration current subsidies offered by CN Marine and whether they are likely to be reduced when the tote road, and especially the Trans Labrador Highway is completed, as this may be an important factor in assessing future commodity flows.

Taxes/Revenues

Our discussion of impacts on demography, housing and infrastructure have shown that there is unlikely to be any significant impact on them as a result of the project. An increase in taxes from this source is therefore dismissed as a result of the tote road.

It is probable that the tote road will have an impact in stimulating new or existing businesses especially related to tourism.

We shall attempt to assess the number of new business opportunities and so give an estimate of the increased tax base at the municipal or regional level. This will be carried out primarily in the tourism component study.

Additional revenues generated as a result of the project will be direct project related and indirectly related due to the opening up of new business opportunities and an increase in the number of tourists coming into the region. Research in this will take the form of consultation with the Department of Development and through interviews with people supplying goods and services to the tourism industry in the area.

It is probable that rates for car insurance, which are the lowest in the province, will change as a result of the project. We will be in contact with insurance agencies to assess the extent of this increase.

Inter-community Activities

The opening of the Labrador tote road may make it possible for various community groups and organizations to engage in inter-community visits. It is expected that without upgrading the Happy Valley/Goose Bay - Churchill Falls Road, impacts of the road will be minimal on the communities in Labrador East. However, in Labrador Centre and Labrador West, there is currently quite a lot of interchange between Labrador City, Wabush and Churchill Falls. CFL Co. itself flies a lot of teams to and from Labrador West. There is no doubt that the tote road would make this much cheaper and perhaps more organizations would engage in such exchange.

Our research will be directed towards a selection of organizations in Labrador West, Churchill Falls and Happy Valley/Goose Bay. We will attempt to show how much inter-community activity takes place at present and what might happen under the tote road situation. Some indication of costs of visits now and with the road will be included.

This information will be collected by phone-call or letter from the selected organizations. The level of significance will be based on the number of inter-community activities that will result. Less than a 5 percent change in number will be of minor significance; 6-15% change will be of moderate significance while anything over 15% will be considered of major significance.

Pollution

The level of pollution in the area could be impacted by the actual construction of the road, and by the public using the road when it is open. Such pollution would include stream/fish habitat damage; car wrecks and other garbage.

It is assumed that damage to streams/fish habitat will be the concern of the engineering and aquatics studies.

Our research in this area will be confined to consultation with the Department of Environment and the RCMP, and also with CFL Co. to assess the extent of pollution on the Esker Road and so predict the extent to which it could affect subsistence food supplies or tourism/recreation resources.

Any deterioration in the value of resources to tourists or recreators will be considered significant.

Access to Areas of Natural Beauty/Wilderness

The tote road (proposed route) would open up large areas of interior Labrador which have previously been inaccessible to the general public. The route for the road must be particularily sensitive to its setting. The study

team will propose general guidelines on routing and construction of the road to ensure a high level of conformity with its surroundings.

The number of people actually leaving the road to explore areas of beauty/-wilderness will be predicted by the tourism component study.

In order to identify where these areas are, we shall be relying on information provided by the biophysical component study and through consultation with officials from the Provincial Parks Division.

Public Parks/Recreation Areas

The impact of the tote road on this factor could be two-fold. It could lead to increased pressure on existing parks and it could increase the need for or potential for opening new parks.

In order to measure the impacts we shall be consulting with representatives from Provincial and National Parks and the Department of Transportation. We shall describe current levels of use in existing parks and, using data on the potential volume of traffic on the road, attempt to assess the need for new parks, eg., picnic/convenience stops along the highway itself. The unit of measurement will be number and size of park areas required or number and size of new provincial and national parks which might be directly attributed to increased access by the tote road. In part this factor will be researched in the tourism component study.

c. Organisations and Groups

Resource Development

Preliminary evidence gathered to date suggests that the impact of the Labrador tote road on resource development would be minimal. Conditions for commercial agriculture in the study area are marginal at best and there is no information available to suggest that the Tote Road would enable products to be produced locally that could compete with imported goods. This has been dismissed as a relevant factor.

According to the ADI report the impact of the tote road on the ability to exploit forest resources will be fairly limited. Data we have received from the provincial Department of Forestry confirms this statement - the only area of commercial forestry is already under exploitation in the Happy Valley/Goose Bay region. Commercial forestry has been dismissed as a relevant factor. However, the road will probably open up some areas for local use, eg. domestic fuel.

We are awaiting data from the aquatic study on the potential for a commercial fishery in the study area. However, ADI reports that although the Small-

wood Reservoir has sufficient yield to establish a commerical fishery the nature of the tote road will not improve transportation to the extent that the fish could be shipped south quickly to U.S. markets. Given a Trans-Labrador Highway, this becomes a possibility.

Consultation with the Department of Mines and Energy indicate no known mining potential in the area accessed by the tote road. Officials from this Department did comment that the road, and indeed any road construction, opens up areas previously accessed by helicopter only, exposes new rock faces for study and so makes their exploratory work less costly and easier. This has been dismissed as a relevant factor in terms of further research required.

The most likely future hydro developments in the study area are at Gull Island and at Muskrat Falls.[3] Neither of these would be developed until demand existed and neither is in the area of the proposed tote road. This has been dismissed as a relevant factor.

The impact upon tourism development is discussed in The Tourism Component Study.

Construction

There is not expected to be an impact on permanent housing and infrastructure required as a result of the tote road. In the short term the construction of the road will have positive impacts on the local construction industry through the provision of contracts to local firms for the actual work on the road. This impact will be assessed directly from the project description and the value of the contracts to be awarded to local firms. The unit of measurement will be in dollars and the level of significance will be assessed at the aggregate level by the amount of money it injects into the regional economy.

Commerce

Impacts upon commerce may arise from:

1. Higher incomes created by employment on the tote road;

2. Change in the volume and cost of shipping goods into and out of the area;

3. Increase in the number of tourists coming into the area.

These three indicators have all been dealt with in previous sections. The last one is covered by the tourism component study.

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[3]Phase 1 Report of the Labrador Resources Development and Transportation Plan, 1981

Agencies/Departments

Administrative units/Jurisdiction

Impact expected to be slight. The opening of the tote road along the preferred route will increase the accessibility of a previously remote area. This may mean an increase in manpower required by some departments in order to control or monitor the area, eg, a wildlife officer, RCMP, etc. We have and will be contacting the relevant agencies for information on this factor.

It will be considered a significant impact if additional manpower/resources are required as a result of the project.

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APPENDIX D: BUSINESS QUESTIONNAIRE

Labrador Tote Road: Socio-Economic Component

1. Location of Business - (tick one)

   Lab City
   Wabush
   C. Falls
   H.V.G.B.
   Mud Lake
   N.W. River
   Sheshatshui

2. Type of business _____

3. Number of employees - (including working owner) ___ full-time _____ part-time _____

4. How long has the business been in operation?
   _____ years

5. Please indicate the category into which your annual gross sales fall.

Less than $25 000	_____
$25 000 - $100 000	_____
$100 000 - $500 000	_____
$500 000 - $1 million	_____
More than $1 million	_____

6. What do you think the main advantages of the Ross Bay Junction to Churchill Fall Tote Road would be to your business?

7. What do you think the main disadvantages of the Labrador Tote Road would be to your business?

8. We would like some information on where your main sources of supply are for goods and raw materials and by what means you obtain them. Could you please indicate this on the table below.

Origin	Type of Items	Transportation Method
A. From NFLD		
B. From Quebec		

C. From Rest of Labrador (continue on back of page if necessary)

9. Does your business experience any of the following problems in obtaining goods? Please indicate the frequency with which these problems occur.

Problem	Never	Sometimes	Often
Damage to goods			
Loss of goods in transit			
Freshness of produce			
Outdated goods			
Delays in receiving goods			
Unavailability of items			

10. Could you please indicate what percentage of your goods and services are marketed in the following places?

Location	% of Total Sales
Labrador West	
Churchill Falls	
Labrador East	
Rest of Labrador	
Newfoundland	
Quebec	
Elsewhere	

11. Will you expand your business with the opening up of the Tote Road?

Yes _____
No _____
Don't know _____

12. If yes, in what ways? (continue on reverse if necessary).

13. The following statements refer to the effects which the Tote Road could have on your business. Please indicate whether you agree, disagree, neither agree or disagree or don't know.

Statement	Agree	Disagree	Neither Agree or Disagree	Don't Know
It will be easier to hire employees				
It will be easier to retain				

employees

It will open up new sources of supply

It will open up new markets

It will reduce total annual transportation costs

It will be cheaper to obtain goods

It will be cheaper to market goods

It will be possible to obtain more reliable shipments

It will allow the import of better quality produce

It will lead to an increase in sales

It will lead to increased business competition

It will increase the need for warehouse space

It will decrease the need for warehouse space

It will allow for smaller inventories

It will reduce breakage or loss of goods in transit

14. Some new businesses will establish themselves as a result of the opening up of the Tote Road.

    Do you agree _____
    disagree _____
    don't know _____

15. If you agree, what sort of businesses?

16. What effects would there be on your business if the Ross Bay Junction to Churchill Falls Road were open on a year round

basis?

17. What effects would there be on your business if there was a road link to Baie Comeau in addition to the all-season road between Ross Bay Junction and Churchill Falls?

18. What effects would there be on your business if there was an all-season road from Happy Valley Goose Bay to Baie Comeau?

19. Are there any other comments you would like to make about the effects that the Tote Road would have on business in Labrador?

Instructions to Interviewer - Business Questionnaire

1. Phone each business listed on the sample to be interviewed, state who you are, who you are working for and why you wish to interview them, as follows.

"The firm I am working for (D.W. Knight Associates) has been contracted by the Provincial Department of Transportation to assist in the preparation of an Environmental Impact Statement for the proposed Tote Road from Ross Bay Junction to Churchill Falls. We are carrying out interviews with a random sample of firms in Labrador to assess the impact which the road may have on business. I would appreciate your time and help in meeting with me to answer a few questions. The results of the interview will be kept confidential although overall findings of the study may be summarized at public meetings in September."

2. Prior to beginning the interview, insure that the interviewee has a clear understanding of the project. Show him/her the study area map provided and point out the preferred and alternate routes. Stress the fact that the road referred to during the interview is a summer Tote Road between Ross Bay Junction and Churchill Falls (except for questions 16 - 18).

APPENDIX E: RESIDENT QUESTIONNAIRE

Hello,

I'm , and I'm working for the consulting firm of D.W. Knight Associates. We have been asked by the Department of Transportation to do some research into the impacts of the proposed Tote Road between Ross Bay Junction and Churchill Falls. We are conducting a telephone survey of a random sample of Labrador residents and your phone number has come up in our sample.

I wonder if you would mind answering a few simple questions for us. The interview will take approximately 5 - 10 minutes and your answers will be kept strictly confidential.

(If yes)

First of all, are you aware of the Tote Road project?

(Explain the proposed road to the interviewee and stress that the questions are directed at a road with summer maintenance. There are two possible routes; one following a direct line between Ross Bay Junction and Churchill Falls (the Department's preferred route) and the other using the Esker Road and paralleling the railway to Ross Bay Junction.)

(Conduct Interview)

Thank you very much for your help.

Telephone Survey

1. Male (Interviewer to tick appropriate box)
   Female

2. Are you currently employed or unemployed?
   Employed
   Unemployed

3. If employed, what is your current job? _____

4. How long have you lived in Labrador?
   All your life
   More than 10 years
   5 - 10 years
   2 - 5 years
   Less than 2 years

5. What do you think the good things about the Tote Road will be?

6. What do you think the bad things about the Tote Road will be?

7. How many trips have you taken out of the community in the last year?

8. Where did you go to and what was your main reason for going?

Trips to:	How did you get there?	Why did you go?

9. Do you think you will use the Tote Road once it is completed?
   Yes _____ No _____

   If yes, where would you go and why?

To	Reason
Lab West	
Churchill Falls	
Lab East	
Rest of Labrador	
Newfoundland	
Elsewhere	

10. Will you use the Tote road to get to new fishing, hunting or trapping areas?
    Yes _____ No _____

11. Are you intending to build a cabin along the Tote Road?

Yes _____ No _____

12. With the opening of the Tote Road, will you visit more with friends and relatives living in other parts of the province?
Yes _____ No _____

13. If yes, where would you go and how often would you go?

Location	Frequency of visits
Labrador West	
Churchill Falls	
Labrador East	
Rest of Labrador	
Newfoundland	

14. Do you feel isolated living in this part of Labrador?
Yes _____ No _____

15. If yes, does this bother you or make you feel depressed?.
Yes _____ No _____

16. If yes, will the opening of the Tote Road have a positive effect on this?
Yes _____ No _____

If yes, how much?
Some effect
Great effect

17. Do you have anything else to add about the impact of the Tote Road?

18. If the Tote Road was open all year between Labrador West and Churchill Falls, would you use it in winter?
Yes _____ No _____

_____If yes, for what purpose?

19. If there was an all-season road between Labrador West and East (ie, a Trans Labrador Highway), would you use it?
Yes _____ No _____

If yes, for what purpose?

20. If there was an all-year Trans Labrador Highway from Happy Valley/Goose Bay to Baie Comeau, would you use it?
Yes _____ No _____

If yes, for what purpose?

APPENDIX F: TRANSPORTATION QUESTIONNAIRE

No space has been provided for answers to the items listed below under Current Operation as it is assumed that much of it would be already organised in other formats. Space is provided for answers to the questions under Future Operation.

NAME OF CARRIER: _____

CURRENT OPERATION

Service to and from Labrador and within Labrador
(include schedule, points served, origins and destinations and any seasonal differences in schedule)

Volumes of Freight and/or Passengers Moved
(volumes moved into and out of Labrador and between points within Labrador (except for coastal Labrador), annual totals, monthly totals (if available) and types of freight)

Prices Charged to Move Freight and Passengers
(cost per volume for freight; cost for different types of freight; passenger fares - regular and charter/discount; cost of shipping vehicles (if applicable)

Present Government or Company Subsidies
(freight, passengers)

Problems Presently Experienced
(eg, delays, cancellations, coping with peak demand, damage to goods)

Proposed Changes in Schedules/Routing/Fares/Tariffs

FUTURE OPERATION

We are interested in what effects the opening of the Tote Road (with summer maintenance only) might have on your operation in Labrador. Effects might include the following (please comment where appropriate):

1. Increase/decrease in number of passengers/freight moved
2. Increase/decrease in fares/tarrifs
3. Changes in current schedule or service
4. Increased/decreased competition
5. Increased/decreased market area

6. Other potential impacts

We are also interested in how your operation would be affected with:

A. The Tote Road from Ross Bay Junction to Churchill Falls open all year round

B. The Tote Road from Ross Bay Junction to Churchill Falls open all year round, with a link to Baie Comeau and the rest of Canada

C. An all-season road from Happy Valley Goose Bay to Baie Comeau.

OTHER COMMENTS

Any other comments you might have relevant to this study would be welcome. (continue on back if necessary)

Thank you for your help.

APPENDIX G: LIST OF PEOPLE INTERVIEWED

List of Key Contacts - by Study Sub Region

Labrador West

Cec Vincent,	Town Manager,	Labrador City
Derm Flynn,	Mayor,	Town of Wabush
Keith Warren,	Town Manager,	Wabush
Bill Campbell,	Manager of Administration,	IOCC
Herb Cooper,	President,	Menihek Construction
Kathy Kennedy,	Social Action Committee	
Joe Flynn,	President,	United Steelworkers of America, Labrador City Local
Cal Luedee,	President,	United Steelworkers of America, Wabush Local
Evelyn Lahout	President	Crafts Guild of Labrador West
Holly Saunders	Secretary	
Dave Lough	Senior Regional Manager	Dept. of Devpt & Tourism
Brian LeMesurier		H. J. O'Connell Ltd.
Ray Gosse	President	Carol Wabush Co-operative Society
Stan Jackowski		Coalition for Equality
Len Leyte	Chairman	MILAP Committee
Bill Foster	Resident Manager	Walbush Mines
Bishop Peter Sutton		Roman Catholic Bishop
Gordon Parsons	President	Chamber of Commerce
Larry Peckford	Manager	Canada Employment Centre
Nelson Larson	Teacher	Lab. City Collegiate
Bill Colbert	Construction Worker	
George Penney	Construction Worker	

LABRADOR EAST

Sterling Peyton		DRIE
Lieut. Col. J.F. David	Commanding Officer	Canadian Forces Station Goose Bay
Capt. W.P. Embleton	Manager	Coastal Services,CN Marine
Sheldon Boone	Operations Manager	Goose Bay Terminal CN Marine
Inspector Leatherdale	Superintendant	HVGB Detachment, RCMP
John McGrath	Assistant Deputy Minister	RAND

Hank Shouse	Mayor	HVGB
Beatrice Watts	Mayor	NW River
Al Durno	Town Manager	HVGB
Catherine Baike-Pottle	Councillor	NW River
Bruce Boles	Chairman	Mokami Reg. Devpt,Ass.
Harold Marshall	Executive Director	HVGB Development Corp.
Ian Strachan	President	Petro Labrador Ltd.
	Chairman	Venture Capital Corp.
Mel Woodward	President	Woodward Group of Companies
Marion Broomfield	Chairperson	Mud Lake Improvement Comm
Pat Vickers	President	Goose Sales and Services-Ltd.
Ed Blake		Blake's Enterprises
Susan Felsberg		Mud Lake
Chief Ben Pokue		Band Council, Sheshashui
Tony Williamson	Director	Institute for Northern Studies, MUN
Cecile Saunders		Mokami Status of Women
Steve Schultz	Manager	Hudson's Bay Company
Barney Powers	President	Labrador Construction Ltd.
Rose Gregoire		Dept. of Social Services Sheshatshui
Greg Penashue	President	NMIA
Lyla MacEachern		Sheshatshui
Bart Jack	Businessman	Sheshatshui
Glen Kirby	Executive Director	Labrador Venture Capital Corporation

CHURCHILL FALLS

Dave Collett	Vice President	Operations & Engineering CFLCo
Adrian Clark	Principal	Eric G. Lambert School
Mike Power	Manager	General Distributors Ltd.

Other Key Contacts

Department or Company	Name	Position	Location
Federal Department of Transport	Peter Schnobb	Public Relations Officer	Ottawa, Ont.
Federal Department of Transport	Margaret White	Regional Planner	Moncton, N.B.
Quebec Air	Pierre Soucy	Manager	Wabush, Lab.
Iron Ore Company of Canada	Brian Duplessis		Labrador City
Carol Moving and Storage Ltd.	Jean-Pierre Collard	President	Labrador City
Household Movers and Shippers (1971) Ltd.	Boyce Bessey	Manager	HVGB
Eastern Provincial Airways	Roy Rideout	Director of Marketing	Elmsdale, N.S.
Eastern Provincial Airways	Peter Campbell		Elmsdale, N.S.
Labrador Airways	G. E. Patey	President	HVGB
Martin's Trucking Service Ltd.	Martin Mesman	Manager	Labrador City
Martin's Trucking Service Ltd.	Muriel White		Labrador City
Town of Labrador City	Karl Hiscock	Mayor	Labrador City
Carol Wabush Cooperative Society	Ray Gosse	President	Labrador City
Labradorian Printers ltd.	Jim Kelland		HVGB
Nfld. Telephone Company	Kel Marshall		St. John's
Labrador West Integrated School	Raymond Rose	Asst. Superintendent	Labrador City

Board			
Petroleum Directorate	Rich Fuchs	Research Director	St. John's
RCMP	Sgt. Roger Holdright	Statistician	St. John's
Baine Johnston Insurance	Charles Vokey	Insurance Rep.	St. John's
Canada Mortgage and Housing Corp.	John Hughes		St. John's
New Labrador Realty	Rick Small	Real Estate Agent	Labrador City
Department of Municipal Affairs	Jack Stratton	Regional Assessor	Corner Brook
Nfld. and Lab. Housing Corp.	Randy Ivany	Regional Assessor	St. John's
Dept. of Rural, Agricultural & Northern Development	Lawr. O'Brien	Director of Development	HVGB
Dept of Rural, Agricultural & Northern Development	Hazen Scarth		St. John's
Canada Employment Centre	Scott Roberts	Manager	HVGB
United Steelworkers of America Local 5795	Randy Collins	President	Labrador City

APPENDIX H: Tables to Accompany:

CHAPTER 4,

a) SECTION 4.2.2 TWO YEARS POST CONSTRUCTION
(iii) Impacts on Business, and

b) SECTION 4.2.3 FUTURE CONDITIONS - TEN YEARS POST CONSTRUCTION

Table 4.1 Type of Business by Sample Area

Type	Lab. West		Lab. East		Total Sample	
Primary Industry	1	4%	0	0	1	2%
Manufacturing	1	4%	1	4%	2	4%
Construction	3	11%	1	4%	4	8%
Transportation/Utilities	1	4%	1	4%	2	4%
Trade, Finance, Real Estate	3	11%	0	0	3	6%
Community, Business and Personal Service	19	68%	17	77%	36	75%
TOTAL	28		22		48	

Table 4.2 Gross sales for Business by Sample Area

Annual Gross Sales	Lab. West		Lab. East		Total Area	
Less than $25,000	1	4%	-	0	1	2%
$25,000-$100,000	1	4%	-	0	1	2%
$100,000-$500,000	7	25%	2	10%	9	19%
$500,000-$1 million	4	12%	-	0	4	8%
More than $1 million	13	46%	12	60%	25	52%
No Answer	2	7%	6	30%	8	16%
TOTAL	28		20		48	

Table 4.3 Length of Time in Operation

Number of Years	Lab. West		Lab. East		Total Area	
Less than 5 years	4	14%	2	10%	6	12%
5 - 10 years	9	32%	7	35%	16	33%
11 - 15 years	7	25%	4	20%	11	23%
16 - 20 years	5	18%	3	15%	8	17%
More than 20 years	3	11%	4	20%	7	15%
TOTAL	28	100%	20	100%	48	100%

Table 4.4 Number of Employees

# of Full Time Employees	Lab. West	Lab. East	Total Area
1 - 10	17	3	20
11 - 20	8	9	17
21 - 30	2	7	9
31 - 40	0	1	1
40+	1	0	1
TOTAL	28	20	

Table 4.5 General Advantages of the Tote Road

Advantages	Lab. West		Lab. East		Total	
No advantage	15	54%	10	50%	25	52%
General increase in business, number of jobs, profitability	10	36%	7	35%	17	35%
Cheaper transport/travel costs/ Increased accessibility	5	18%	2	10%	7	15%
Would open up Labrador/de-isolation/reduced turnover	2	7%	2	10%	4	8%
Lower inventories/less warehousing/lower insurance costs	0	0	2	10%	2	4%

Table 4.6 Perceived Disadvantages of the Tote Road

Disadvantages	Lab. West	Lab. East	Total
None	28	15	43
Increased/competition	-	1	1
Not an all weather road	-	4	4
TOTAL	28	20	48

Table 4.7 Expansion of Business with Tote Road

	Lab. West		Lab. East		Total	
Yes	6	21%	4	20%	10	21%
No	16	57%	11	55%	27	56%
Don't Know	6	21%	5	25%	11	23%
TOTAL	28	100%	20	100%	48	100%

Table 4.8 Type of Business Expansion Foreseen

	Lab. West	Lab. East	Total
Expansion of Market Area	6	2	8
Set up new business/ Expand existing one	5	2	7
Hire more employees/ Enlarge premises	4	1	5
Other	1	-	1

Table 4.9 Tote Road to Result in New Businesses

	Agree		Disagree		Don't Know		
Lab. West	16		5		7		28
Lab. East	11		3		6		20
TOTAL	27	56%	8	17%	13	27%	48

Table 4.10 Type of New Business to be Set Up

	Lab. West	Lab. East	Total	
Tourism Related	10	7	17	35%
Highway Related	11	9	20	42%
Natural Resource Development	3	1	4	8%
Other	2	3	5	10%

Table 4.11 (a) and (b) Isolation/De-Isolation - Business
(a) It will be easier to hire employees

	Lab. West		Lab. East		Total	
Agree	4	14%	2	10%	6	12%
Disagree	20	71%	12	60%	32	67%
Neither Agree or Disagree	3	11%	5	25%	8	17%
Don't Know	1	4%	1	5%	2	4%
Total	28	100%	20	100%	48	100%

4.11 (b) It will be easier to retain employees

	Lab. West		Lab. East		Total	
Agree	12	43%	5	25%	17	35%
Disagree	12	43%	7	35%	19	40%
Neither Agree or Disagree	4	14%	4	20%	8	17%
Don't Know	0	0	4	20%	4	8%
Total	28	100%	20	100%	48	100%

Table 4.12 (a) and (b)

4.12 (a) It will open up new sources of supply

	Lab. West		Lab. East		Total	
N/A		23%		-		23%
Agree	6	21%	13	65%	19	65%
Disagree	17	61%	3	15%	20	42%
Neither Agree or Disagree	2	7%	4	20%	6	13%
Don't Know	1	3%	0	20%	1	2%
Total	28		20		48	

4.12 (b) It will open up new markets

	Lab. West		Lab. East		Total	
Agree	20	71%	12	50%	32	67%
Disagree	7	25%	4	20%	11	23%
Neither Agree or Disagree	-	-	3	15%	3	6%
Don't Know	1	4%	1	5%	2	4%
Total	28		20		48	

Table 4.13 It Will Reduce Total Annual Transportation Costs

	Lab. West		Lab. East		Total	
N/A						
Agree	5	18%	8	40%	13	27%
Disagree	21	74%	9	45%	30	63%
Neither Agree or Disagree	1	4%	3	15%	4	8%
Don't Know	1	4%	0	0	1	2%
Total	28		22		48	

Table 4.14 It Will be Cheaper to Obtain Goods

	Lab. West		Lab. East		Total	
N/A						
Agree	5	18%	9	45%	14	29%
Disagree	22	78%	8	40%	30	63%
Neither Agree or Disagree	1	4%	2	10%	3	6%
Don't Know	-	-	1	5%	1	2%
Total	28		22		48	

Table 4.15 It Will Be Cheaper To Market Goods

	Lab. West		Lab. East		Total	
N/A		14%		-		12%
Agree	7	25%	7	35%	14	30%
Disagree	18	64%	10	50%	28	58%
Neither Agree or Disagree	2	7%	3	15%	5	10%
Don't Know	-	-	-	-	-	-
Total	28		22		48	

Table 4.16 Reliability of Shipments

It will be possible to obtain more reliable shipments

	Lab. West		Lab. East		Total	
N/A		14%				14%
Agree	4	14%	9	45%	13	27%
Disagree	21	74%	6	30%	27	56%
Neither Agree or Disagree	1	4%	3	15%	4	8%
Don't Know	1	4%	2	10%	3	6%
Total	28		20		48	100%

Table 4.17 Quality of Produce

It will allow the import of better quality produce

	Lab. West		Lab. East		Total	
N/A	23	82%	10	50%	33	69%
Agree	-		3	15%	3	6%
Disagree	5	18%	3	15%	8	17%
Neither Agree or Disagree	-	-	3	15%	3	6%
Don't Know	-	-	1	5%	1	2%
Total	28		20		48	100%

Table 4.18 Reduction of Breakage/Loss of Goods

It will reduce breakage or loss of goods in transit

	Lab. West		Lab. East		Total	
N/A	1	4%			1	2%
Agree	2	7%	4	20%	6	13%
Disagree	22	79%	6	30%	28	58%
Neither Agree or Disagree	2	7%	5	25%	7	15%
Don't Know	1	4%	5	25%	6	13%
Total	28		20		48	

Table 4.19 Effect on Sales

It will lead to an increase in sales

	Lab. West		Lab. East		Total	
N/A						
Agree	19	68%	12	60%	31	65%
Disagree	8	29%	5	25%	13	27%
Neither Agree or Disagree	-	-	2	10%	2	4%
Don't Know	1	3%	1	5%	2	4%
Total	28		20		48	100%

Table 4.20 Effect on Competition

It will lead to increased business competition

	Lab. West		Lab. East		Total	
N/A						
Agree	11	39%	11	55%	22	46%
Disagree	16	57%	5	25%	21	44%
Neither Agree or Disagree	1	4%	3	15%	4	8%
Don't Know	-	0%	1	5%	1	2%
Total	28		20		48	

Table 4.21 Increase in Warehouse Space

It will increase the need for warehouse space

	Lab. West		Lab. East		Total	
N/A	4	14%			4	14%
Agree	0	0%	7	35%	7	15%
Disagree	23	48%	11	55%	34	71%
Neither Agree or Disagree	1	4%	2	10%	3	6%
Don't Know	0	0%	0	0%	0	0%
Total	28		20		48	

Table 4.22 Decrease in Warehouse Space

It will decrease the need for warehouse space

	Lab. West		Lab. East		Total	
N/A	4	14%			4	14%
Agree	0	0%	7	35%	7	15%
Disagree	23	48%	11	55%	34	71%
Neither Agree or Disagree	1	4%	2	10%	3	6%
Don't Know	0	0%	0	0%	0	0%
Total	28		20		48	

Table 4.23 Size of Inventories

It will allow for smaller inventories

	Lab. West		Lab. East		Total	
N/A	3	11%	-		3	6%
Agree	2	7%	7	35%	9	19%
Disagree	23	82%	10	50%	33	69%
Neither Agree or Disagree	0	0%	3	15%	3	6%
Don't Know	0	0%	0	0%	0	0%
Total	28		20		48	

Table 4.24 Length of Residence

Length of Residence	Lab. West		C. Falls		Lab. East		Total	
All their life	1	2%			10	23%	11	7%
More than 10 years	32	78%	13	65%	21	49%	66	63%
5 - 10 years	6	15%	4	20%	3	7%	13	12%
2 - 5 years	2	5%	2	10%	7	16%	11	13%
Less than 2 Years		-	1	5%	2	5%	3	3%
TOTAL	41	100%	20	100%	43	100%	104	100%

Table 4.25 Good Things About the Tote Road

	Lab. West		C. Falls		Lab. East		Total	
None	3	7%	2	10%	4	9%	9	9%
Increase in Business[1]	6	15%	0	0	8	18%	14	13%
Tourism Development	1	2%	1	5%	5	12%	7	7%
Accessibility	30	73%	12	60%	28	65%	70	67%
De-isolation	12	2%	8	40%	3	7%	23	22%

Table 4.26 Bad Things About the Tote Road

	Lab. West		C. Falls.		Lab. East		Total	
None	21	51%	9	45%	28	65%	58	56%
Cost - Building								
- Maintenance	13	32%	2	10%	9	20%	24	23%
Crime/Accidents/ Fires	3	7%	6	30%	3	7%	12	11%
Environmental Damage	1	2%	3	15%	1	2%	5	5%
Decline in other travel services	2	4%	0	0	0	0	2	2%

[1]It is understood that several of these categories of response are not mutually exclusive but after reviewing the questionnaire responses in depth it was felt that this breakdown best represented the range of views expressed. "Increase in business" covers such responses as increase in sales or markets, hiring new employees or expanding the premises. "Tourism development" includes more visitors to the area, new hotels/motels, fish camps, and increase in sales resulting from increase in tourist traffic. "Accessibility" refers to improvements in the transportation system reflected in cheaper travel/transportation costs, an alternative means of transportation, and easier travel to and from the area. "De-isolation" is seen as a social benefit of the road and is reflected in statements such as 'it will be easier to get out of Labrador', and 'it will be easier to hire employees'.

Table 4.27 Feeling of Isolation - Do You Feel Isolated Living Here?

	Lab. West		C. Falls.		Lab. East		Total	
Yes	29	71%	20	100%	30	70%	79	76%
No	12	29%	0	0	13	30%	21	24%
TOTAL	41		20		43		104	

Table 4.28 Does Isolation Bother You

	Lab. West	C. Falls.	Lab. East	Total
Yes	13	17	14	44
No	16	3	7	26
TOTAL	29	20	21	70

Table 4.29 Positive Effect of Tote Road on Reducing Isolation

	Lab. West		C. Falls		Lab. East		Total	
Yes	10	77%	13	76%	12	86%	35	80%
No	3	23%	4	24%	2	14%	9	20%
TOTAL	13	30%	27	39%	24	31%	44	100%
If yes, to what extent.								
Some effect	3	30%	6	46%	4	33%	13	37%
Great effect	7	70%	7	54%	8	66%	22	63%
TOTAL	10	29%	13	37%	12	34%	35	100%

Table 4.30 Use of Tote Road

	Lab. West		C. Falls		Lab. East		Total Area	
Yes	36	88%	18	90%	32	74%	86	83%
No	5	12%	2	10%	11	26%	18	17%
TOTAL	41		20		43		104	

Table 4.31 Propensity to Travel by Region

(A)

	Business			Visiting			Vacation		
	From:			From:			From:		
	L.W.	C.F.	L.E.	L.W.	C.F.	L.E.	L.W.	C.F.	L.E.
To:									
Lab. West	-	2	3	-	2	3	-	5	15
Ch. Falls	0	-	1	4	-	2	4	-	7
Lab. East	2	0	-	6	2	-	5	4	-
Rest of Lab.	0	0	0	0	0	0	1	1	3
Nfld.	0	0	1	1	0	27	11	13	0
Elsewhere	0	0	2	0	0	2	1	9	11

(B)

	Shopping			Recreation		
	From:			From:		
	L.W.	C.F.	L.E.	L.W.	C.F.	L.E.
To:						
Lab. West	-	6	0	-	2	2
Ch. Falls	0	-	0	4	-	1
Lab. East	0	2	-	4	0	-
Rest of Lab.	0	0	0	0	1	0
Nfld.	0	0	0	0	0	0
Elsewhere	0	0	0	1	0	0

Table 4.32 Visits with Friends and Family

Lab. West		C. Falls.		Lab. East		Total Sample	
19	46%	15	75%	21	49%	55	53%

Table 4.33 Propensity to Travel - Total Sample

	Business	Visit Friends & Fam.	Vacation	Shopping	Recreation
Lab. West	3	5	10	6	6
C. Falls	1	6	11	0	5
Lab. East	2	8	9	2	4
Rest of Labrador	0	0	5	0	1
Nfld.	0	2	51	0	0
Elsewhere	2	2	21	0	1

Table 4.34 Destination and Frequency of Trips for Total Sample

Destination	Lab. West	C. Falls	Lab. East	Rest of Labrador	Nfld.
Frequency of Trips					
> Once a Month	2	1	1	1	1
Once a Month to Once in Three Months	12	7	5	2	0
Twice a Year	5	5	6	2	8
Once a Year	1	3	4	0	31
< Once a Year	0	1	1	0	0
TOTAL	20	17	17	5	40

Table 4.35 Destination and Trip Frequency for Labrador West Residents

Destination	Churchill Falls	Labrador East	Rest of Labrador	Nfld.
Frequency				
> Once a Month	-	-	1	-
Once a Month to Once in Three Months	4	1	1	-
Twice a Year	2	5	-	1
Once a Year	2	3	-	17
< Once a Year	1	1	-	-
TOTAL	9	10	2	18

Table 4.36 Destination and Trip Frequency for Churchill Falls Residents

Destination	Labrador West	Labrador East	Rest of Labrador	Nfld.
Frequency				
> Once a Month	2	1	-	-
Once a Month to Once every Three Months	7	4	-	-
Twice a Year	3	1	2	7
Once a Year	-	1	-	5
< Once a Year	-	-	-	-
TOTAL	12	7	2	12

Table 4.37 Destination and Trip Frequency for Labrador East Residents

Destination	Labrador West	Churchill Falls	Rest of Labrador	Nfld.
Frequency				
> Once a Month	-	1	-	-
Once a Month to Once Every Three Months	5	3	1	1
Twice a Year	2	1	-	-
Once a Year	1	1	-	9
< Once a Year	-	-	-	-
TOTAL	8	6	1	10

Table 4.38 Other Uses of the Tote Road

	Lab. West		C. Falls		Lab. East		Total Sample	
Fishing and Hunting	23	56%	5	25%	23	53%	51	49%
Building Cabin	4	10%	0	0	4	10%	8	8%

Table 4.39 Use of an all Season Tote Road

(Resident Questionnaire)

Sample	Lab. West		C. Falls		Lab. East		Tot Samp	
Will use the Tote Road in Winter	22	54%	14	70%	27	63%	63	61%
Shopping	0	-	6	30%	1	2%	7	7%
Business	0	-	0	-	4	9%	4	4%
Visit Family & Friends	5	12%	8	40%	6	14%	19	18%
Winter Sports/ Recreation	13	31%	4	20%	8	19%	25	24%
Leave on Vacation	5	12%	5	25%	20	46%	30	29%

Table 4.40 Impacts of all Season Tote Road
(Business Questionnaire)

Impacts of All Season Tote Road	Lab. West		Lab. East		Total	
None	14	50%	3	15%	17	35%
Increased Competition	1	4%	0	0%	1	2%
Deisolation/reduced Employee Turnover	2	7%	0	0%	2	4%
Cheaper, Improved Transportation	2	7%	6	30%	8	17%
Expansion of business, Markets	12	43%	8	40%	20	42%
Loss Warehousing, Small Inventory	0	0%	9	45%	9	19%
Other	0	0%	2	10%	2	4%

Table 4.41 An All Season Trans-Labrador Highway (Resident Questionnaire)

	Lab. West		C. Falls		Lab. East		Total	Sample
Number who will use it	22	54%	19	95%	38	88%	79	76%
Reasons								
Shopping	0	0	8	40%	2	5%	10	10%
Business	2	5%	1	5%	6	14%	9	9%
Visit Family & Friends	14	34%	12	60%	12	28%	38	36%
Vacation/Leave Labrador by Alternate Route	10	24%	12	60%	31	72%	53	51%

Table 4.42 All Season Trans-Labrador Highway to Baie Comeau (Resident Questionnaire)

	Lab. West		C. Falls.		Lab. East		Total	Sample
Number who will use it.	37	90%	19	95%	35	81%	91	88%
Shopping	1	2%	3	15%	3	7%	7	7%
Business	1	2%	0	0	4	9%	5	5%
Visit Family & Friends	10	24%	5	25%	12	28%	27	26%
Vacation/Leave Labrador	32	78%	19	95%	33	77%	84	81%

Table 4.43 Impacts on Business of Trans-Labrador Highway to Baie Comeau

Impacts on Business	Lab. West		Lab. East		Total	
None	6	21%	2	10%	8	17%
Increased Competition	2	7%	2	10%	4	8%
Deisolation/Reduced Turnover	2	7%	0	0%	2	4%
Cheaper/Alternate Transportation	9	32%	12	60%	21	44%
Expansion of Business/Markets	15	54%	7	35%	22	46%
Reduced Warehousing/Inventory	1	4%	8	40%	9	19%
Other	0	0%	1	5%	1	2%